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VERTICAL INTEGRATION AND CONCENTRATION

IN THE ALBERTA BROILER INDUSTRY

BY



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The undersigned certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "Vertical Integration and Concentration in the Alberta Broiler Industry," submitted by Roy R. Hurnanen in partial fulfilment of the requirements for the degree of Master of Science.

ABSTRACT

The broiler industry in Alberta has become extremely concentrated within the past few years at the hatchery and processing levels of the marketing continuum. Production of the raw material has experienced a trend to corporate ownership by vertically integrated firms. This thesis examines the cause and possible consequences of high concentration and extensive vertical integration in the industry.

The scale economies available to a company that is vertically integrated through all phases of the broiler industry, combined with a limited market area to serve, indubitably leads to industry concentration. The operational efficiency that is derived from high concentration is necessary to maintain a competitive position with regard to interprovincial markets. Intraprovincially, however, the degree of market power and concomitant deterioration of exchange efficiency associated with high concentration and complete integration of the marketing process leads to problems of a local nature. Producer interests could not be enhanced through the Alberta Broiler Grower's Marketing Board when a large proportion of production quota is controlled by the integrated firm. Competition among the remaining hatcheries and processors is virtually non-existent due to the dominant position of one firm. It is recommended that the firm in question be induced to refrain from pursuing its acquisition policy at all stages of the industry, while allowing other firms to improve their competitive positions. A policy of this nature would not be detrimental to the operational efficiency of the industry and would prevent further corrosion of the pricing mechanism.

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CHAPTER I

INTRODUCTION

The production of poultry meat in Canada has experienced a remarkable increase during the past decade in association with technological advances resulting in production efficiency and improved product quality. In 1958, 470.4 million pounds of poultry meat were produced. Production figures for 1968 indicate an increase to 806.8 million pounds. Per capita consumption of poultry meat increased from 27.6 pounds in 1958 to 39.7 pounds in 1968.¹ The entire increase in production has been absorbed by the domestic market but not without substantial instability in farm and retail prices.

Poultry meat has been gaining in percentage of all meat consumed due mainly to price attractiveness and improved product quality. Poultry's per capita share of all meat consumed increased from 10.5 percent in 1949 to 21.0 percent in 1966. In terms of rate of growth, per head consumption of poultry meat expanded at 5.6 percent per year during the 1949 to 1966 period, compared with a 1.3 percent per year increase in total red meat and poultry consumption.²

Production changes in Alberta are of similar magnitude. Marketings of all poultry meat through registered stations increased from 23,156,000 pounds in 1959 to 45,533,000 pounds in 1968, eviscerated

¹ Canada Department of Agriculture, Poultry Market Review. Annual Reports. (Ottawa: Poultry Division and Markets Information Section, Production and Marketing Branch, 1960, 1968), p. 12, p. 17A.

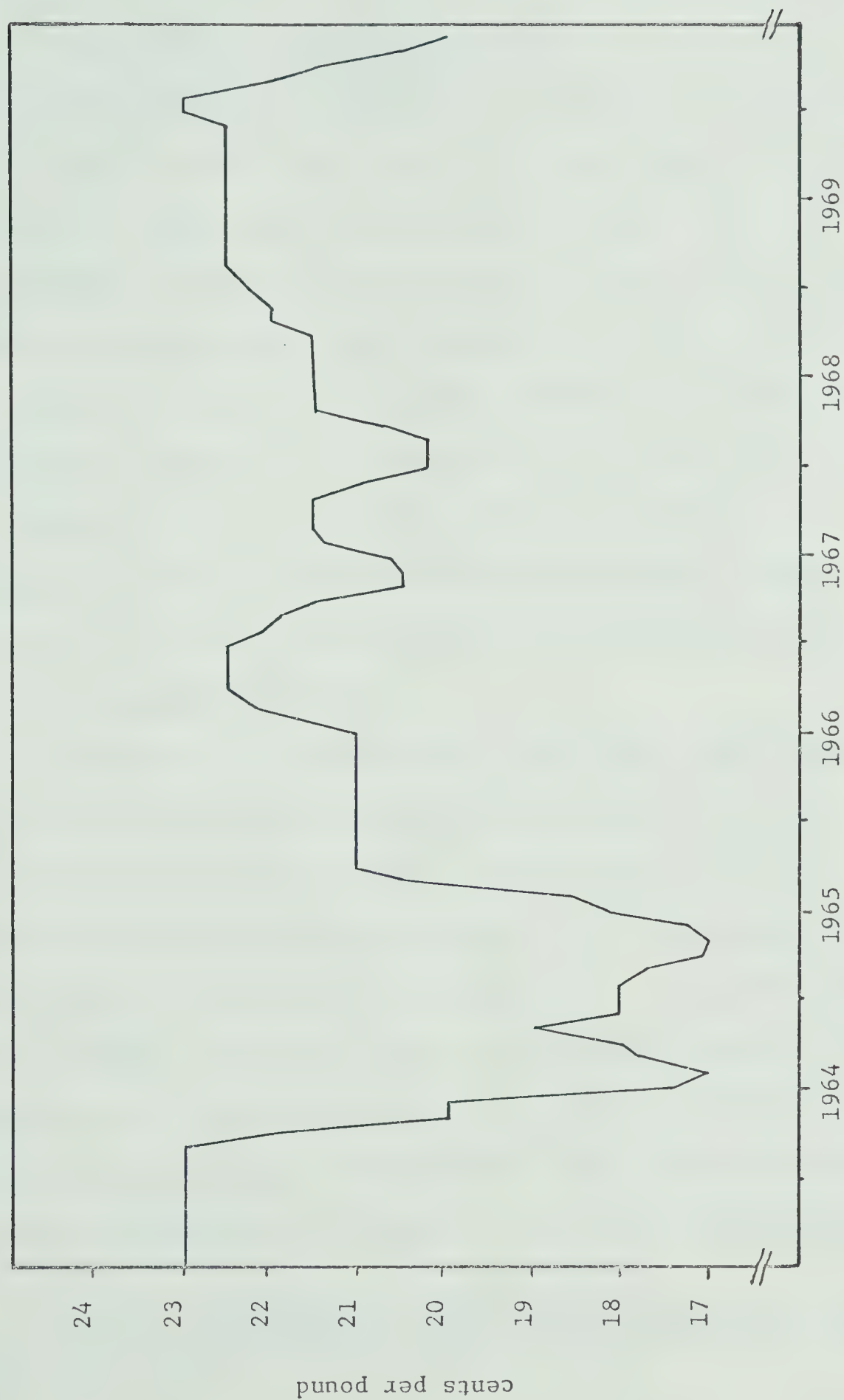
² M. K. Emmery, The Outlook for Poultry Meat in Canada to 1980 (Ottawa: Economics Branch, Canada Department of Agriculture, 1967), p. 6.

weight basis. Marketings of broiler chickens (under 4 pounds eviscerated weight) in 1959 totalled 6,670,000 pounds; marketings increased to 25,570,000 pounds in 1968.¹ Extrapolation of this trend indicates marketings of 40.3 million pounds by 1975, and 50.8 million pounds by 1980. Broilers are becoming a significant factor in total poultry marketings, increasing their share of this category from 29 percent in 1959 to 56 percent in 1968. Alberta ranks fourth in broilers slaughtered by province with 6 percent of the total Canadian output, following Quebec (39 percent), Ontario (36 percent), and British Columbia (7 percent).

The rapid expansion of broiler production in the province was accompanied by considerable price instability (Figure 1). Prices to producers dropped from 23 cents per pound in 1963 to a low of 17 cents in 1964. Prices recovered in 1965 and remained in the 20-23 cent per pound range to the end of 1968. The price fluctuations experienced by growers in this period were sufficient to discourage many growers from producing broilers commercially. Those who wished to remain in the industry on a commercial basis faced high capital investment commitments if they were to gain the efficiencies of large-scale production. Many growers were unwilling to risk investment in an enterprise that was not assured of a ready market for the product at a reasonable price. Some turned to feed companies, hatcheries, or processors for financing and other arrangements designed to reduce the risk involved in production. Other producers with a high investment in production facilities realized the dangers of uncontrolled surplus production, hence steps were taken to establish a producer marketing board with the power to control

¹ Canada Department of Agriculture, op. cit., p. 23, p. 26.

Figure 1
PRICES RECEIVED BY PRODUCERS, BROILERS UNDER 5 POUNDS, ALBERTA, 1963-1969.



Source: Canada Department of Agriculture, Poultry Market Review, Annual Reports.

marketings through quotas and to set minimum producer prices. The board was established in 1965 and became operative in September 1966.

Corporation Control in the Industry

The Broiler Board was formed under the Marketing of Agricultural Products Act¹ with the broad objectives of promoting, controlling, and regulating the transportation, processing, packing, storage, and marketing of broiler chickens in the province of Alberta. The Agricultural Products Marketing Council gave the Board the power to license hatcheries, producers, processors, truckers, warehouse, and wholesaling agents; the power to set and allot marketing quotas; and the power to specify a minimum price to be received by registered growers. The establishment of the Board and the subsequent registration of grower facilities served to identify the holdings of large integrated firms, which were at that time substantial.

The acquisition of growing facilities by these well-financed firms has continued since the Board began operations and has caused concern among Board members and growers. In addition to the concern arising from acquisition of growing facilities by the large integrated corporations, the Marketing Board has become aware of the growing market power of these firms. The recent trend towards merger of some of the major segments of the industry has led to increased concentration in the hatchery and processing stages. Combined with their holdings of growing facilities, the major integrated firms have a high degree of potential

¹ Alberta, The Marketing of Agricultural Products Act, R.S.A. 1955, Office Consolidation (Edmonton: Queen's Printer).

market power that the Marketing Board considers to be detrimental to the performance of the industry. If the acquisition of production facilities continues unabated, the Marketing Board feels it might lose much of its bargaining power in negotiations with other segments of the industry.

Broiler Board Submission

The Board has the power to fix and allot quotas to production facilities. It apparently does not have the power to refuse transfer of quotas when the production facilities are transferred through ownership or lease. Thus the processing firms can obtain title to the quota allotted to growing facilities by buying or leasing those premises. The Board apparently cannot discriminate between corporate and independent ownership except to the extent that the Board may offer and allot new quotas on a priority basis to independent growers. The Board has requested approval from the Alberta Agricultural Products Marketing Council for implementation of a policy that would allow the Board to refuse to fix and allot a quota to any integrated grower giving that person or company more than 20 percent of the total authorized quota. In addition, the Board seeks approval to limit to 50 percent of total authorized quota the amount allotted to all integrated growers combined. The authority to do so appeared to be provided for by the Marketing of Agricultural Products Act.¹

- (iii) the refusing to fix and allot to any person a quota for the marketing of a regulated product for any reason that the Council considers proper.

¹ Ibid., p. 6, (iii), (iv), (v).

- (iv) the reducing of, or refusing to increase a quota fixed and allotted to any person for the marketing of a regulated product for any reason that the Council considers proper and
- (v) the transferability or non-transferability of quotas and prescribing the conditions and procedures applicable to the transfer of quotas.

The words "for any reason that the Council considers proper," would appear to allow the Council to discriminate for or against any person or class or persons using any criterion as a basis. However, there is some doubt that this clause is intended to allow the Council to discriminate against any individual or corporate body on the basis of considerations that do not relate directly to the objectives of the Marketing of Agriculture Products Act. The purpose of the Act is to "provide for the promotion, control and regulation, in any or all respects, of the marketing of agricultural products within the province."¹ Implementation of the policy advocated by the Broiler Grower's Marketing Board involves serious legal consideration as well as social, economic, and philosophical implications. Legislative sanction is required because of the inferences to restraint of trade and anti-combines legislation. A policy of the nature suggested by the Broiler Board, if supported by legislation, could well set a precedent for related areas of agriculture and industry.

Basic Objectives of the Study

The purpose of this thesis is to determine the economic effects of concentration and integration in the Alberta broiler industry. It is hypothesized that:

¹ Ibid., p. 2.

(1) the degree of concentration existing in hatcheries and processing yield high operational efficiency with concomitant deterioration of pricing efficiency,

(2) extensive vertical integration has erected barriers to entry and has resulted in the attainment of substantial market power by one firm,

(3) the Alberta Broiler Grower's Marketing Board has prevented optimum growth of the local industry, and

(4) the combined effect of these factors has been to introduce inefficiencies in resource allocation and income distribution, with excessive costs of the finished product being absorbed by consumers. Given that the hypothesis is not refutable, public policy alternatives will be suggested to ameliorate the identified problems.

The current status and trends in concentration and integration will be examined, and the structural relationships among producers, processors, hatcheries, and feed manufacturers will be analyzed. The extent of interregional and interprovincial competition will be studied in relation to the comparative advantage of Alberta in broiler production under alternative levels of concentration and integration. The impacts of concentration and integration on consumers, small producers, large producers, processors, feed manufacturers, and hatcheries will be analyzed with respect to pricing practices, freedom of entry, economies of scale, and other relevant economic criteria. The effects of marketing board action with regard to price setting, quota allotment, and regulation of marketing will be studied with respect to the basic considerations

of efficiency in production and distribution as well as producer, processor, and consumer welfare. An attempt will also be made to provide information relevant to the social desirability of alternative levels of concentration and integration and to point out the possible needs for regulation of the industry.

CHAPTER II

VERTICAL INTEGRATION IN THE BROILER INDUSTRY

Vertical Integration Defined

The term "vertical integration" has many definitions,¹ making it necessary to define the term as it will be used in this paper. Vertical integration is thus defined as the coordination of decision-making between two or more successive stages in the production process, either through formal agreement, ownership, or leasing of facilities. Emphasis is placed on the coordinating role of vertical integration, with the necessary distinction being made between ownership integration and contract integration. Ownership integration will be further subdivided by the method under which ownership is obtained. Ownership may occur through internal expansion by a person or firm whereby new facilities are constructed, or through acquisition in which existing facilities are purchased in whole or in part by the integrating firm.

The direction of integration, that is, forward or backward, is important to understanding the phenomenon of vertical integration. The instigator of integration and the stages of production that are involved must necessarily be singled out for an analysis of the cause and effect dichotomy of vertical integration.

¹ There is some confusion regarding the exact meaning of the term "vertical integration" due to the variety of situations to which the term could be applied. For clarification of the concept as it relates to the poultry industry, see J. T. Hill, "Vertical Integration and the Poultry Meat Industry," Canadian Farm Economics, Vol. 1, No. 3 (August 1966), p. 8.

Factors Contributing to Vertical Integration

The nature and extent of vertical integration in the Alberta broiler industry will be analyzed in a later section of this thesis. However, several possible factors that have caused the broiler industry to be susceptible to vertical integration should be described. These factors must be prevalent among the various stages of production to account for the popularity of vertical integration as an organizing structure. What are these elements that tend to integrate the several phases of the total production process?

Historically the production of chickens took place on thousands of farms, usually as a supplementary enterprise to provide income in kind and give the children of the family some responsibility. Broiler or fryer chickens were mainly a seasonal treat. Today broilers are a major item in the meat departments of large volume supermarkets, competing very successfully with other meats.

This transition of broilers from a delicacy to a regular part of the consumers' budget did not occur by chance. As H. K. Leckie explains

... There has been a definite, planned co-ordination of the efforts of poultry breeders, hatcherymen, feed suppliers, producers, processors, distributors and retailers all along the line, with the latest research findings of nutritionists and other scientists promptly applied to all levels. Standardized production on an efficient volume basis has become the rule. As a result, the consumer now has, throughout the year, the choice of an attractive uniform product, competitively priced. The buying response has been terrific.¹

The industry geared itself to an integrated program to exploit and satisfy the potential demand for the product. To a large extent

¹ H. K. Leckie, "Whither Integration?" Canadian Journal of Agricultural Economics, Vol. 7, No. 1 (1959), p. 57.

the broiler industry, as it is now, was born integrated; that is, it is the broiler industry that is new rather than integration. If producers were to fulfill the latent demand for broilers, they required large-scale production units. The necessary size for a specialized grower is considered to be 30,000 square feet, which is filled four to five times a year.¹ Growers required large amounts of credit to establish and maintain this size of operation, both on a long- and short-term basis. They required an assured outlet and a reasonable price for their product in order to decrease the inherent risk involved in production.

Producers' incentive to increase their volume of production and realize the economies of scale derived therefrom also depended on credit availability on reasonable terms and guaranteed salability of production. Feed companies and processors were often more willing to finance enterprising growers than were banks or other lending institutions. Contact with feed and processing firms allowed producers that were long on initiative but short on managerial skills to benefit from the coordinated efforts of specialists in all phases of the industry.

Hatcheries and feed manufacturers also had an impetus for integrating vertically. Assurance of an outlet for their chicks and feed allowed efficiency in operation. Hatcheries could contract their chicks to independent growers, thus enhancing the planned placements of eggs. Ownership of growing facilities by hatcheries eliminated the risk of loss through cancellation of orders or miscalculation of demand.

¹ Alberta Broiler Grower 's Marketing Board, "Submission to the Alberta Agricultural Products Marketing Council," January 3, 1967, p. 4. (mimeographed)

More adequate use of resources and facilities could result when optimal planning occurred. Similarly feed companies had an investment to protect. The technology involved in improving feed conversion ratios required feeds consisting of complex portions of various antibiotics, grains, and minerals. Haphazard demand for these specialized feeds could not justify the investment involved. The feed manufacturers found it profitable to extend credit to producers in the form of feed to be paid for when the broilers were sold. Large feed companies could borrow money at prime rates not available to small producers and pass these savings on to the producer. Both participants benefitted from the arrangement; the feed company through its guaranteed sales and the producer through favorable credit terms. Expansion of growing facilities was encouraged, since the volume of feed consumed by a large-scale broiler operation was substantial over a year. It was also advantageous for the larger feed manufacturers to engage in processing and distribution in order to provide an outlet for the grown birds.

The demands of retailers and drive-in outlets for large volume, high quality, and uniform broilers put pressure on the processors to supply this market. The search for greater operational efficiency¹ (reduction of input costs with unchanged or improved output of product and services) centered mainly on raw material availability. The processors required reliable sources of broilers, in the right quantity, at the right time and place. Stable supplies of raw material were necessary to make uniform, efficient use of processing facilities. Uncoordinated arrival of live birds at the processing plants led to alternating

¹ Richard L. Kohls, Marketing of Agricultural Products (3rd ed., New York: MacMillan Co., 1967), p. 11.

shut-down and overtime operation, indeed a costly procedure. Consequently, coordination between producers and processors was a significant step to more efficient marketing. This coordination was best obtained by processor ownership of growing facilities or through formal and informal agreements with the larger independent growers. The latter would be expected to be a more favorable alternative to the processor under normal circumstances since ownership of the facilities entails hired labor with consequent Canada Pension Plan, workman's compensation, and other employee costs.

Derivatives of Vertical Integration

A central theme implied, but not specifically stated in the above discussion, was the inadequacy of existing markets as a prominent feature in the trend to integration. Atomistic producers could not be relied upon to supply the right quantity and quality of broilers at the right time. The alternate "boom and bust" function of the competitive market was a formidable taskmaster. The vertically integrated structure with its high degree of administered coordination was a natural consequence arising from the instability of atomistic supply and price determination. It should be noted that not only does vertical integration reflect inadequate markets, it tends to generate the displacement of established markets. The passing of such markets need not be mourned, for as Gray states:

Effective price coordination at fewer junctures is more desirable than ineffective coordination at more junctures--proliferation of the pricing function is not a desideratum in itself.¹

The coordinating feature of vertical integration cannot be minimized. The ability to gear all phases of the production process to meet the specifications for final product are in large part responsible for the growth and acceptance of the broiler industry by consumers. The efficiencies attained by balancing output at lower stages in the production process with requirements at higher stages, although difficult to measure, are significant.

Vertical integration does not, however, insure additional efficiencies through economies of scale at any one stage of the production process. Two producing units of equal size, one under independent management and the other a part of an integrated operation, need not show significant differences in operational efficiency. The integrated operation, however, has the advantage of expanding horizontally, that is, adding production units of optimal size. Horizontal expansion is not a sign of operational efficiency but one of financial capability not as readily available to the independent operator. Marginal efficiency gains from this form of expansion may be assumed to be minimal.

Complete vertical integration allows the integrator to by-pass the established markets at each phase of production. Costs can be substantially reduced through vertical integration by elimination of

¹ Roger W. Gray, "Vertical Integration and Market Coordination," Vertical Integration in Agriculture, Proceedings, Joint Conference of the Marketing Research Committee and the Farm Management Research Committee of the Western Agricultural Economics Research Council (Reno, Nevada, 1959), p. 56.

exchange activities at intermediate steps in the production process. Vertically related activities often involve complementary or supplementary technical relationships, therefore least-cost combinations of activities result in lower total costs than do the cumulative costs of activities performed independently.¹ Additional motivations for vertical integration involve uninterrupted flow and quality of inputs, elimination of bargaining friction over input costs, and attainment of market power. By controlling the relationships between joint activities in the production and marketing process, risk and uncertainty can be reduced, resulting in a greater degree of efficiency throughout the entire process. Viewed in this light, vertical integration is more a phenomenon of market organization rather than technological innovation. Market control, however, may effectively form barriers to entry either through overall economies of scale or through the integration process itself. Where per unit costs do not reach a low level until volume becomes very high, size itself can be a deterrent to entry.² Vertical integration may also cause absolute cost barriers to entry by making entry at all production phases necessary in order to have a competitive operation. Vertical integration can also be used as a competitive weapon beyond the range indicated by technical efficiency. A firm that is totally integrated need not concern itself with intermediate costs as long as the margin added to the final product covers all costs and insures a profit. If independent operators require

¹ O. P. Blaich, "Integration in Theory with an Application to Hogs," Journal of Farm Economics, Vol. 42 (December 1960), p. 1286.

² Stanley K. Seaver, "An Appraisal of Vertical Integration in the Broiler Industry," Journal of Farm Economics, Vol. 39, No. 5 (December 1957), p. 1494.

any of the intermediate products (e.g., chicks, feed, processing), the cost to them may not adequately reflect production cost plus reasonable markup.

Tying arrangements become attractive to an organization that is integrated at two or more stages of the production process. This arrangement involves "package deals" where integrator chicks are sold to independents conditional on the grown birds being processed at the integrator plants. Tying arrangements become very effective when regional concentration is evident at one or more of the major production phases.

It is evident that vertical integration per se has virtually conceived the modern broiler industry. It has evolved as an efficient form of organization through the dynamics of growth. Many of the technical efficiencies have been realized; there are undoubtedly some that remain untapped. The question arises: Will future developments be in line with gaining these potential technological advantages, or will they be directed at establishing market control and dominance of the industry, not based on efficiency considerations?

CHAPTER III

THE CONCEPT OF MARKETING EFFICIENCY

Structure, Strategy,¹ and Exchange Efficiency

Economic examination of an industry involves the analysis of that industry's structure, its behavioral characteristics (strategy), and its performance based on relevant criteria. Industry structure refers to the economically significant features of a market which affect the behavior of the firms in the industry.² The number and size distribution of firms, barriers to entry, growth rate of market demand, and elasticity of demand³ for the product are important elements of structure. Strategy refers to a firm's policies with regard to pricing, quantity produced, quality control, and services, as well as its reactions to moves initiated by competitors.⁴ Strategy is essentially the link between

¹ The word "strategy" is used rather than the traditional terminology "conduct" because the latter term often implies business ethics and questions of morality. Strategy specifically involves considerations based on gaining advantages over competitors within an economic framework.

² Richard Caves, American Industry: Structure, Conduct, Performance (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967), p. 16.

³ Elasticity of demand measures the responsiveness of quantity demanded to price changes. It is the percentage change in quantity demanded due to a percentage change in price. If demand is elastic, i.e., greater than 1, a 1 percent change in price will cause quantity demanded to change by more than 1 percent. Conversely, inelastic demand indicates that the percentage change in quantity demanded will be less than the percentage change in price.

⁴ For a complete treatment of this element of marketing, refer to G. R. Winter, Conduct in Canadian Food Marketing, Agricultural Economics Research Council of Canada, July 1969.

an industry's structure and its performance, although the causal direction among structure, strategy, and performance is not precise. Performance is the measure of how efficiently the market carries out its functions of exchange, resource allocation, and income distribution in the economy.

Under the assumptions of perfect competition, exchange or pricing efficiency is maximized. Such competition ensures that costs and prices will gravitate to the lowest point on the long run average cost curve and that "normal" zero profits will be realized.¹ Resource allocation and income distribution will be optimal assuming that the initial resource distribution is optimal and economies of scale are exhausted at low levels of output.

When concentration in an industry increases the common result is a decline in the efficiency of the exchange mechanism. Each firm has a significant share of the market, hence policy decisions by one firm will affect the strategy of other firms directly. Realization of this mutual interdependence leads to price and quantity decisions significantly different from impersonal atomistic competition. Pricing strategy may lead to various forms of non-competitive practices such as agreements among sellers (or buyers), tacit collusion, or price leadership. The result is a diminution of the effectiveness of price in generating efficiency in exchange, resource allocation, and income distribution.

¹ Normal zero profits in this context indicates a "threshold" level of profits adequate to keep existing firms in the industry but low enough to discourage new entry of firms.

Strategy and structure become increasingly interdependent as industry concentration increases. Firms in the industry have access to certain forms of strategy that can change or control the structure of the industry. Some business policies implicitly involve increasing industry concentration by eliminating rivals or preventing new competition from entering the industry. This strategy may be intentional or simply a consequence of profit maximization motives. Intentional or "coercive" conduct may include predatory pricing, squeeze tactics, or erection of entry barriers. Predatory pricing involves the reduction of market price to an unprofitable level by a dominant firm, where this firm has strong financial reserves, a lower cost structure than rivals, or sustained sources of profit from other markets. The intent of predatory pricing is to weaken, subordinate, or eliminate industry rivals.¹ Squeeze tactics and entry barriers usually occur when the aggressive firm is vertically integrated over several stages of the production process and substantially controls one stage. The integrated firm can then lower its paying price to suppliers who have few other outlets and raise its price to buyers who have few alternative sources of supply. Barriers to entry are evident in these circumstances as entry must occur at all stages of production in order to ensure a viable entity.

The growth rate of market demand for the product is an important aspect for consideration. If there is a stable, non-growing market, price competition designed to increase market shares is infeasible. Price cuts will be matched by other firms, and lower industry profits will result because the total market has not increased. In a growing

¹ Daniel I. Padberg, Economics of Food Retailing (Ithaca, New York: Cornell University, 1968), p. 172.

industry, the temptation to cut prices increases when production capacity is increased to the point where demand no longer exceeds supply. Price cutting may then increase individual market shares, provided short-run losses from this action can be endured to realize potential long-term gains.

Approximately the same interpretation arises when considering industries that have different elasticities of demand for their product. When demand is inelastic, price-cutting by one firm is imitated by all firms, but total sales do not increase appreciably. In contrast, multilateral price cutting in an industry that produces a product with elastic demand will increase total industry sales. The increased volume of sales will offset at least partly the lower profits per unit from the price cut. Competition is thus much more probable in the industry with elastic demand.

Concentration and integration are thus seen to be both cause and result of the behavioral characteristics of an industry. Economic theory broadly assumes that high levels of concentration are associated with excess profits and misallocation of productive factors between industries. However, the resultant degree of concentration in an industry derives from a constellation of forces. Foremost is the firm's inherent drive to attain efficient size by exploiting large-scale economies of production and distribution. These technological considerations normally define certain limits within which degree of concentration and exchange efficiency are compatible. Ordinarily the degree of concentration is not wholly determined by technology alone but simultaneously by other concentration increasing forces.

Drives to restrict competition by reducing the existing number of market rivals will increase concentration, occurring through mergers of existing firms at the horizontal or vertical level, by eliminating weaker firms from the industry, or by excluding potential entrants. Many firms have an overt tendency towards gaining a dominant market position. Acquisition or possession of strategic advantages over all present and potential competitors tends to increase and perpetuate concentration. Control of resource supplies or production outlets, as well as technological supremacy in production, are such advantages.

Organization, Logistics, and Operational Efficiency

The degree of performance through exchange efficiency in the industry is dependent upon the twin component of industry structure and the strategy alternatives available to firms. However, judgement of performance based solely on exchange efficiency is incomplete without consideration of the operational efficiency exhibited by firms in the industry. Operational efficiency is a measure of how well the firms perform the basic physical functions of marketing--assembly, processing, and distribution. It derives from the internal organization of the firm and is dependent upon the "logistics" of the system, that is, the physical movement of goods through the channels of procurement and distribution.¹ The logistics concept involves realization of the interaction between components of the total system with respect to time and costs. Historically each component was independently managed and it was believed that

¹ John P. Doll, V. James Rhodes, and Jerry G. West, Economics of Agricultural Production, Markets and Policy (Homewood, Illinois: Richard D. Irwin, Inc., 1968), p. 257.

if costs were minimized for each component, costs of the total system would also be minimized. However, cost minimization for the entire system will occur only if the components of the system are independent with respect to major inputs. Since the stages of production are not independent, operational efficiency can be enhanced by coordinating the components of the total system. Trade-offs can be used to establish a balance among the various production stages by offsetting higher costs in one stage by realized lower costs in one or more interdependent stages.

Cost minimization through operational efficiency is a prominent goal for the firms in an industry. Unparalleled success in achieving this goal by one or more firms will lead to industry concentration. Drop-out of inefficient firms is expected as a matter of course. Where economies of scale in assembly, processing, and distribution can be realized at a very high volume of production, a monopoly situation becomes the logical conclusion.

Market performance is therefore the combined result of exchange or price efficiency (ϵ), and operational efficiency (Ω). Industry structure and strategy alternatives determine pricing efficiency, while organization and logistics determine the operational efficiency of the system, giving

$$M = \phi(\epsilon, \Omega)$$

where M is total marketing efficiency.

Policy decisions designed to improve total market efficiency must involve consideration of the correlation (ρ) between exchange efficiency and operational efficiency. If $\rho(\epsilon, \Omega) > 0$, then either variable can be improved with a corresponding improvement in the other

variable and consequent enrichment of the total marketing process. If $\rho(\epsilon, \Omega) = 0$, then improvement in either variable will not affect the remaining variable, again having a positive effect on the total system. However, when $\rho(\epsilon, \Omega) < 0$, a positive change in one variable will produce a negative reaction in its counterpart, with the disconcerting conclusion that the overall effect on efficiency of the system is often indeterminate. It is then the responsibility of society through the democratic process to judge the relative merits of exchange efficiency versus operational efficiency and make decisions that will alleviate the indeterminacy.

Given that an industry is progressive and that firms in the industry are competitive with respect to cost-reducing innovations, both technological and organizational; and given that market information is reliable, widely disseminated, and accurately interpreted, the two elements of performance will usually be negatively correlated. The problem of market efficiency becomes one of choice between operational and exchange efficiency, or maintenance of a balance between them. In developing countries the philosophy is to get the job done (i.e., operational efficiency) and then concentrate on structural aspects. In Canada and the United States the trend has been to allow businesses to pursue operational efficiency with acceptance of concomitant deterioration in exchange efficiency, up to some subjective limit. This limit is usually reached when further lessening of exchange efficiency would become detrimental to the public interest, at which level exchange

efficiency is given precedence at the cost of sacrificing possible operational efficiencies remaining in the system.¹

The importance of maintaining a minimum degree of exchange efficiency in the market system stems from the irreversible nature of diminishing exchange efficiency. It is difficult to halt declining exchange efficiency while additional operational efficiency is still attainable, and it is virtually impossible to regain a prior level of exchange efficiency once lost. These considerations are involved in the concept of "effective competition,"² a realization that deviations from the theoretical construct of perfect competition are both inevitable and necessary in a dynamic environment. Emphasis is placed on maintaining a form of competition that is socially desirable and attainable. The specification of desirable conditions that must be present in a market or industry to be called effectively competitive (or conversely, undesirable conditions that must be absent) has not been sufficiently developed to be included in anti-combines legislation. The present lack of economic expertise in the legal formulation and interpretation of the legislation has resulted in forfeiture of its primary objective, that of maintaining a competitive environment.

¹ This philosophy is expressed through the anti-trust laws, where monopoly is undesirable due to the absence of pricing efficiency even though a monopoly structure may be the ultimate in operational efficiency.

² For the latest treatment of this subject, refer to Stephen H. Sosnick, "Toward a Concrete Concept of Effective Competition," American Journal of Agricultural Economics, Vol. 50, No. 4 (November 1968), p. 827.

A Note on Market Power¹

A consequence of attaining superior operational efficiency in a dynamic industry is market power. Brandow defines market power as follows:

A firm may be said to possess market power if a price, production, marketing, or purchasing decision it might practically make, can directly and materially affect the incomes of other firms or persons or can appreciably change the average price, total quantity, or marketing or purchasing practices in a market in which it participates.²

The pursuit and possession of market power will assure the survival of the successful firm. Several sources of market power are in evidence. A large market share of the relevant market is probably the most common. Large financial reserves give considerable leverage in competitive struggles. Geographic extension over local markets allows the firm to pursue different competitive practices in one area without affecting their operations in areas removed. A vertically integrated firm with significant control over one phase of operation can apply squeeze tactics to those specialized in other phases. The diversification over production stages ties the firm's fortunes to the total outcome of production, thus cushioning the risk of any singular operation. The size and number of purchasing firms can contribute to market power. A buyer that can adequately merchandise the available supply of the selling firm is a distinct asset. Agreements between large buyers and sellers put pressure on less fortunate rivals to find sufficient

¹ Many of the ideas presented here are due to George E. Brandow, "Market Power and Its Sources in the Food Industry," American Journal of Agricultural Economics, Vol. 51, No. 1 (February 1969), pp. 1-12.

² Ibid., p. 2.

sources of supply or adequate outlets for buyers' and sellers' respective markets. Market power can also be derived from operating efficiency, marketing effectiveness, and progressiveness. A firm exhibiting these characteristics will likely be regarded as an industry leader.

The use of market power depends on the competitive conditions existing in the market. Short-run market power will not be synonymous with long-run excess profits unless there are formidable barriers to entry. Even so, short-run market power can be perpetuated by exercising restraint in using its power. It may even have beneficial effects on the industry by stabilizing prices and introducing innovations. Abuse of long-run market power is likely to lead to industry inefficiency and stagnation.

Presence or absence of market power will give little indication of market performance. Some market power exhibited by firms is a natural consequence of the economic system and is desirable up to a point. This point is reached when a policy change by a dominant firm discourages competitive reactions by other firms or implicitly commands an expected similar action. Competition is then effectively suppressed, and the nebulous benefits of discreet market power are irreclaimable.

CHAPTER IV

THE NATURE AND EXTENT OF VERTICAL INTEGRATION

There are several means by which a firm may become a vertically integrated structure. The more common methods include internal growth, acquisition of existing business units, and contractual arrangements. All of these arrangements fulfill the major objective of integration, that is, coordination of decision-making by the parent body (integrator). Each form of coordination has different implications when considering the competitive environment of the industry.

Internal Growth

New investment in construction of new plants or remodelling of old plants is referred to as internal growth. In terms of competition, it is a preferred form of growth, either horizontally or vertically. Construction of new facilities implies that the latest in technological developments will be incorporated into the facilities. Internal growth is usually an aggressive competitive measure in that cost reductions are incorporated into the changed pattern of production. Competitors are forced to change if they expect to maintain their competitive position through defensive measures in the form of similar cost reducing innovations. Adequate competition, combined with the lower costs of production, may enable consumers to benefit from the changing course of production.

A requirement for internal growth is a growing demand for the product of the industry. Firms are expected to compete vigorously to increase their shares of the market. Price competition is possible

when technological innovations reduce costs. Quality competition, through product variants or improved services further increase demand for the product. These conditions are conducive to internal growth, vigorous competition, and consumer welfare.

Growth Through Acquisition

Acquisition involves gaining control over an existing company or enterprise, usually by purchasing the assets or outstanding shares of the company. It is a popular form of growth, as current merger activity across many product lines will attest. Growth by acquisition has one immediate outcome--one or more decision-makers disappear from the competitive arena.

The effects of merger on the competitive sphere depend, to a large extent, on the initial position of the firms involved. Two small firms uniting in an industry which has several larger competitors would usually result in a greater degree of competition. Large firms in the industry would need to consider their policies and practices in light of stronger competition presented by the united firms. However, when a large firm acquires smaller firms, competition may be reduced substantially. If the acquired firm was dynamic and prosperous by itself, market power may be the real outcome. Market power need not be detrimental to the industry or consumer welfare if the new organization results in efficiencies and correspondingly lower costs which are passed in part to consumers. If market power and economies in operation are joint products of merger, there is no guarantee that

the resulting structure will be suited to consumer benefits.¹ The absence of a strong competitive fringe nearly insures that cost savings will remain as excess profits to the firm.

Excess capacity in an industry may be a contributing factor in desirable mergers. Only through reorganization of the structure can efficiency in production be attained. Obsolete plants can be shut down and products channelled to the most efficient unit, realizing economies from volume and full capacity operation. Mergers under these conditions are desirable provided that competition still exists.

Acquisitions are probably the least expensive method of entering new locations or entering new fields. By buying out a progressive, proven, and well-established firm, there is no necessity for setting up new supply channels. The goodwill attached to the acquired firm ensures continuing patronage. In contrast expanding by new building and investment could prove very costly. Supply sources must be established; distribution systems and outlets must be found; managers and operating personnel must be acquired. Unless the firm has a strong competitive advantage with its new facilities, it may prove very difficult to acquire and maintain an economic volume of business. This is especially true if the market for the product or services is not expanding rapidly.

Contractual Arrangements

A third form of integration strategy involves contracting. Contracts are most common between producer and feed manufacturer,

¹ Peter Helmberger, "Farm Mergers and General Welfare," American Journal of Agricultural Economics, Vol. 50, No. 5 (December 1968), p. 1489.

processor, or hatchery. The producer retains ownership of his facilities while agreeing to use or provide to the other party of the contract the specified product. The common contracts provide remuneration to the grower as a fee for growing, a guaranteed price, a profit-sharing arrangement, or any combination of the three. Contracting can be a very competitive arrangement if there are several firms offering contracts and the contracts are not long-term.

The Extent of Integration

Contract production of broilers accounts for about 75 percent of U.S. broiler production. About 20 percent comes from farms owned by agribusiness firms. Only 5 percent of total production is produced by independent growers.¹ In Ontario 88 percent of the broilers produced in 1960 were grown under some form of contract.² In contrast contracting has not developed significantly in the broiler industry in Alberta. A survey of Alberta broiler producers indicated that only 13.5 percent of the respondents had contracts of any kind.³ Short-term credit for chick and feed purchases was common. Sixty-one percent of the respondents received chicks on credit to be paid for when the finished birds were sold. Feed manufacturers extended feed on credit to 51 percent of the

¹ E. P. Roy, "Effective Competition and Changing Patterns in Marketing Broiler Chickens," Journal of Farm Economics, Vol. 48, No. 3 (August 1966), p. 191.

² G. I. Trant and J. H. Nurse, Broiler Contracts in Ontario (Guelph: Ontario Agricultural College, 1961), p. 1.

³ The author used a mailed questionnaire to all registered growers in the province, to which 49.5 percent of the producers replied. The questionnaire is reproduced in the Appendix.

growers reporting. The results of the survey indicate that the majority of growers usually assume all the risks of production. Chick and feed purchases as well as broiler sales have developed on an independent basis with the producer making use of the best prices and services available. However, producers do not often change suppliers or processors once established, unless the terms of trade become quite favorable.

There are three vertically integrated firms in the Alberta broiler industry that are of major importance to be referred to as Firms A, B, and C. A fourth firm, Firm E, has hatchery, processing, and feed manufacturing facilities, but their involvement in broilers is small. Firm F was once a factor, but they relinquished their growing and processing facilities to Firm C in 1968. Firm B (associated with Firm D, a large feed manufacturing concern) is the only firm active in all five stages of the broiler industry, specifically hatcheries, growing, feed manufacturing, processing, and wholesale distribution of the finished product. Firm C is active in all phases except hatcheries, and Firm A has facilities for all stages of production except feed manufacturing. However, Firm A's fifty percent interest in Firm B implies total integration considering that Firm D owns the remaining fifty percent interest in Firm B.

CHAPTER V

CONCENTRATION IN THE ALBERTA BROILER INDUSTRY

Concentration in an industry refers to the number of firms in the industry and the percentage market share attributed to each firm. Measures of concentration in this report were obtained from data received from the broiler producers in Alberta,¹ from interviews with members in the industry, and from information obtained through the Marketing Board. The data gathered accounts for approximately 75 percent of the broilers produced. The remaining 25 percent of production inputs and services is assumed to be proportionately distributed among the firms involved. The results obtained from the study are believed to be representative of actual concentration in the various stages of the industry.

Concentration in Hatcheries

The 1968 Poultry Market Review² states that there were 28 registered hatcheries in Alberta in that year. Only eight of these hatcheries are of importance to the broiler industry. The remaining twenty hatcheries are low capacity operations used mainly to service small farm demand.

Concentration in the broiler hatchery industry has increased considerably in the past year due to the acquisition of Hatchery S by Firm A and the merger of Firm A with the Firm B organization, which

¹ For details of the questionnaire used to survey producers, refer to the Appendix.

² Canada Department of Agriculture, op. cit., 1968, p. 46.

has the controlling interest in Hatchery B.¹ In 1967 and 1968, seven separate firms were the major suppliers of broiler chicks. These firms with their percentage market shares for 1967 and 1968 are listed below.

Table 1*

MARKET SHARES OF BROILER HATCHERIES IN ALBERTA

Firm	Market Share	
	1967	1968
	(percent)	
Hatchery A	36	36
Hatchery S	21	20
Hatchery B	22	22
Hatchery P	6	6
Hatchery E	10	10
Hatchery Q	5	5
Hatchery R	<1	<1

The competitive structure for 1969 differs markedly from the one presented previously. The combining of Firm A, B, and Hatchery S lead to the following results (based on 1968 market shares) in Table 2.

¹ Letter designations will be consistent throughout the thesis, i.e., hatchery A is owned by Firm A, feed company C is owned by Firm C, etc.

* Tables 1 to 10 are derived from primary data originated for this thesis.

Table 2

MARKET SHARES FOR ALBERTA BROILER HATCHERIES - 1969

Firm	Market Share (percent)
Hatchery A A - Hatchery B Hatchery S	79
Hatchery E	10
Hatchery P	6
Hatchery Q	5
Hatchery R	<1

Firm A, which initially supplied the largest share of the market through its two hatcheries located in Lethbridge and Edmonton, has increased its market share by acquiring the second and third largest hatcheries in the province. Its market share has increased from 36 percent to 79 percent (given 1968 market shares). Firm A's two largest competitors together supply only 16 percent of the market, compared with 42 percent before the acquisitions.

The figures are equally impressive when viewed regionally. Hatchery E in Lethbridge (10 percent) and Hatchery Q in Calgary (5 percent) are the only competitors to Firm A in southern Alberta. In Edmonton, Hatchery P (6 percent) and Hatchery R (<1 percent) compete with Firm A. Neither of these hatcheries are integrated vertically, and they must be expected to offer somewhat less than vigorous competition.

Concentration in Production

In 1969 a total of 2.1 million square feet of growing space was allotted for the production of broilers by the Alberta Broiler Growers' Marketing Board. There are 94 independent growers of broilers, and 11 farms that are part of vertically integrated organizations. The integrated farms are by far the largest; average size is 84,880 square feet, compared with an average size of 12,800 square feet for independent operations. There are three major companies that have integrated growing and processing through ownership. These companies are Firm A, Firm B, and Firm C. Firm C entered the field in late 1968 by acquiring the growing and processing facilities of Firm F. The control over growing facilities by these companies and the increase in control occurring between March 15, 1968, and March 15, 1969, is shown in Table 3. Control is taken to be through wholly or partly owned and leased premises. It does not include control exercised through contracts, association, advances of money or credit.

The change in total percentage of quota controlled by the integrated operations is attributed to one firm, that being Firm A. In one year it increased its control over growing facilities from 12.83 percent to 20.74 percent of total quota issued. This increase was obtained totally through acquisition. Firm B has not made any recent acquisitions; three of their farms were obtained between 1964 and 1966, coincident with the initial formation of the Marketing Board and the date it began operations.

Table 3

PROCESSOR CONTROL OF GROWING FACILITIES IN ALBERTA

Firm	Farm	Square Feet	
		1968	1969
A	A1	217,200	217,200
	A2	39,400	39,400
	A3	---	38,700
	A4	---	56,400
	A5	---	84,000
Total		256,600	435,700
B	B1	62,800	62,800
	B2	150,000	150,000
	B3	60,000	60,000
	B4	71,600	71,600
Total		344,400	344,400
C	C1	104,800	104,800
	C2	44,000	44,000
Total		148,800	148,800

Three integrators control 44.22 percent of total quota allotment. The remaining 55.78 percent of quota is in the hands of 94 independent operators, the largest of which has 75,000 authorized square feet. Of crucial significance is the fact that these three companies also have major shares of the processing and hatchery capacity in the province. Additional concentration of production facilities in the hands of these integrators will undoubtedly reduce competition for independent production.

Table 4

PROCESSOR CONTROL OF QUOTA AS A PERCENTAGE OF TOTAL QUOTA IN ALBERTA

Firm	1968		1969	
	Sq. Ft.	Percent of total allotment	Sq. Ft.	Percent of total allotment
A	256,000	12.83	435,700	20.74
B	344,400	17.22	344,400	16.40
C	148,800	7.44	148,800	7.08
Processor Total	749,800	37.49	928,900	44.22
Total Allotment	2,000,000	100.00	2,100,000	100.00

The situation becomes critical when the merger of Firm A and Firm B interests is considered. This places a total of 37.14 percent of the growing facilities in this province under one combined management. Its nearest competitor has 7.08 percent of the growing space. The dominant position of Firms A and B is emphasized when it is realized that their competition must come primarily from 94 independent operators involved only in growing, who have limited financial backing and few alternate outlets for their product.

Concentration in Feed Manufacturing

Feed manufacturing is the most competitive stage of production in the broiler industry. Although Firm D is the dominant firm supplying Alberta's broiler growers, there is an active competitive fringe of firms with smaller but substantial shares of the market. A total of seven firms supply the major feed requirements of broiler growers, with several other firms supplying the remainder of the total market.

Market shares for feed manufacturing firms were estimated for 1967 and 1968. These figures are presented in Table 5. Firm D owes much of its prominence in the feed industry to its 50 percent interest in Firm B, which, in turn, owns over 16 percent of the growing space in the province. This captive market ensures Firm D of a major share of feed sales on an annual basis. The recent affiliation of Firm A with Firm B will likely indicate an increase in business in the Edmonton area for Firm D. Firm F's share of the market probably will decrease from its 1968 level due to its disposal of Farm C1 to Firm C, and consequently Firm C's market share will be higher in 1969.

Table 5

MARKET SHARES OF POULTRY FEED MANUFACTURERS IN ALBERTA

Firm	Percent Market Share	
	1967	1968
Feed Company D	41	40
Feed Company F	25	20
Feed Company C	17	15
Feed Company E	7	8
Feed Company U	2	10
Feed Company G	2	4
Feed Company H	4	2
Other	<u>2</u>	<u>1</u>
Total	100	100

The majority of independent growers are at liberty to change feed suppliers when conditions warrant such a change. This fact is largely responsible for the competitive nature of the feed supply industry. The opportunity to change feed suppliers is enhanced by the availability of several suppliers in most locations. Prices, services, and quality of feed are competitive measures that may be used to gain customers, hence performance in the feed industry can be expected to be satisfactory.

Concentration in Processing

The highest degree of concentration in any stage of the broiler industry occurs in processing. Three firms--A, B, and C--process over 95 percent of the broilers produced in Alberta. Firm E, the only other firm of significance does approximately 3 percent of the broiler processing business. Firm B is based in Calgary and operates a low volume satellite plant in Two Hills. Firm A has processing plants in Lethbridge, Calgary, and Edmonton; Firm E is located in Calgary and Edmonton, and Firm C has one plant in Edmonton. Percentage market shares for each firm are given in Table 6.

The result of the Firm A-B merger is that 81 percent of the product in Alberta goes to plants that are under one consolidated management. Approximately one half of the 81 percent comes from Firm A and B owned farms. Another large share goes through the A-B plants because independent producers have no alternatives. The only "competition" in southern Alberta is Firm E in Calgary. Shipment to Edmonton for processing by Firm C is impractical for producers in the

Table 6

CONCENTRATION IN PROCESSING

Firm	Percent Market Share	
	1967	1968
B ¹	46	44
A	34	37
C - F ²	17	16
E	3	3

¹ Includes product processed at Two Hills plant.

² Firm C acquired Firm F's processing plant in October 1968.

south of the province. In effect, there is almost no competition in processing in southern Alberta and only meagre competition in the Edmonton area.

Summary of Concentration and Vertical Integration

The composite structure of the industry and the involvement of the major firms is presented in Table 7. The figures represent percentage market shares for the firms in the respective categories, based on 1968 figures.

The most striking feature in Table 7 is the total dominance of the Firm A-B complex in hatcheries, production, and processing. Its apparent absence in feed manufacturing is compensated by its association with Firm D. Although the A-B organization does not own the majority of production facilities,¹ its competitive advantages at this stage are magnified by its vertical organization over all market channels.

¹ Concentration in production through Firm A is greater than is indicated by Table 7 due to the cooperative nature of the organization. Members of the cooperative can be expected to patronize their organization, thus giving Firm A greater control over production than is indicated by actual ownership.

Table 7

COMPOSITE MARKET SHARES FOR THE BROILER INDUSTRY IN ALBERTA, 1968

Firm	Share of Total Output			
	Hatcheries	Production	Feed Manufacturing	Processing
	(percent)			
A-B	79	37	--	81
D	--	--	40	--
C	--	7	15	16
E	10	--	8	3
3 Independent Hatcheries	11	--	--	--
94 Independent Producers	--	56	--	--
4 Independent Feed Co's.	--	--	37	--
Total	100	100	100	100

The vertical structure of Firm A-B is sufficient to indicate significant market power; when viewed horizontally at each successive level the structural condition of the industry is critical. While market power at any level of the marketing process can cause economic inequities, monopolistic conditions at more than one level tend to accumulate in market power.¹ The situation prevailing in the industry at present is typified by

... the cartoon of an elephant saying, "everyone for himself and free competition for all," as he pranced through a crowded broiler house.²

¹ Bruce Mallen, "Introducing the Marketing Channel to Price Theory," Journal of Marketing, Vol. 28 (July 1964), p. 29-33.

² Doll, Rhodes, and West, op. cit., p. 13.

CHAPTER VI

IMPLICATIONS OF CONTROL IN THE ALBERTA BROILER INDUSTRY

The Firm A-Firm B complex is the dominant organization in the broiler industry in Alberta. Firm A has only recently attained its commanding position and has done so through acquisition of Hatchery S and Farm A4, through purchase of Farms A2, A3, and A5, and by acquiring a controlling interest in Firm B, a subsidiary of Firm D. As a result, Firm A now directly or indirectly controls 79 percent of the hatchery business, 37 percent of the broiler quota allotment, and 81 percent of the processing in the province. Through its association with Firm B and Firm D, a major portion of the feed supply business will accrue to the Firm A complex making it a totally integrated organization.

The degree of control exhibited by Firm A over all phases of the broiler production process clearly makes it the leader in the industry.¹ Pricing of chicks and the magnitude of processing margins for the industry are a direct result of Firm A's policies and practices. Firm A has a large degree of freedom in policy making because of its dominant position and lack of effective competition from other firms in the industry.

Performance in the Alberta broiler industry is thus the result of two major factions--Firm A and the Broiler Growers' Marketing Board. Each exercises a significant degree of control in the industry--Firm A by its high degree of market power and the Marketing Board through its powers attained by legislative sanction. The practices and policies of these two forces determine the nature and direction of change in the

¹ Firm A's dominant position in the broiler industry is complemented by substantial involvement in the turkey industry, which adds to Firm A's over-all market power through product diversification.

industry. Two characteristics of the industry merit attention in describing the implications of control, specifically elasticity of demand for the product and the growth rate of market demand.

Elasticity of Demand

Retail demand for broilers is generally conceded to be price elastic. Brandow estimated price elasticity for chicken to be -1.2 .¹ Wood, using weekly data, obtained an estimate of -2.1 .² Emmery used a demand elasticity of -1.3 in his supply-demand analysis of poultry meat in Canada.³

An industry producing a product with an elastic demand should be a dynamic, growing industry. Production expansion results in lower prices, and these lower prices bring forth an increase in quantity demanded. The result is to increase total industry profits, since total volume of sales more than compensates for the decline in price. (Overproduction, of course, will lead to short-run losses and industry adjustment.) Price competition in the broiler industry is thus expected to be effective in lowering consumer prices. Price competition should occur between firms as each firm endeavors to increase its share of the market.

¹ George E. Brandow, Interrelations Among Demands for Farm Products and Implications for Control of Market Supply, Pennsylvania Agricultural Experiment Station, Bull. 680 (1961), p. 59.

² J. W. Wood, "Some Aspects of the Marketing and Pricing of Broilers in Ontario," Canadian Journal of Agricultural Economics, Vol. XI, No. 1 (1963), p. 59.

³ Emmery, op. cit. p. 16.

Growth Rate of Market Demand

The demand for broilers is affected by population changes, changes in income and income distribution, and the prices of competing products such as pork and beef. Emmery's study covering the period 1949-1965 showed a 7.85 percent per year increase in the retail consumption of poultry meat.¹ Of this total growth, 2.4 percent was attributed to population growth, 2.2 percent to incomes, -0.1 percent due to changes in pork prices, and 3.1 percent of growth accounted for by declines in poultry meat prices. Beef prices were considered insignificant because the adjusted beef prices were nearly the same at the beginning and end of the study period.

Firms in the industry facing this rate of market demand growth should be expected to be very competitive with respect to price because production capacity can be increased on relatively short notice. An excess demand condition is quickly reversed as production resources are mobilized, resulting in price cutting motivations to move the excessive supply increase. Given the present rate of population growth combined with higher per capita income and relatively high beef and pork prices, demand for broilers should continue to increase. Attractive consumer prices will enhance this expansion in demand. Firms will endeavor to capture as large a part of the market as possible. Short-run losses to firms using price competition as a competitive policy may be compensated for by the longer term volume of sales expansion. Competition of this form is a healthy situation for consumer welfare.

¹ Emmery, op. cit., p. 16.

Effects of the Marketing Board

The ability of processors in the industry to take advantage of the favorable market for broilers depends upon their access to the raw material. Availability of birds to processors is controlled by the Marketing Board through its quota system. The objective of the Board is to plan supply to meet demand, thereby reducing downward price pressure to the producers. The effectiveness of this system depends on the accuracy of demand predictions and subsequent supply adjustment. When demand is underestimated, as it was through much of 1969, processors and producers alike are unable to avail themselves of profitable opportunities to expand their markets. High prices in the province and a flood of imports are the immediate results accruing to the supply restriction policy. Processors have no alternative but to import products from other provinces to meet their commitments to retailers in Alberta. Transportation charges and a trading margin established by the processor keep Alberta prices high but not to the advantage of the Alberta producer, who is no longer fulfilling the demand in his own province. Continuation of this situation will cause other provinces to consider Alberta as a profitable market for their production. The long-term effects of this possibility are not promising for the industry in Alberta.

The imposition of market quotas has other immediate effects. Processors and feed manufacturers as well as hatcheries that had invested in production facilities prior to establishment of the Board, found that expansion of their facilities was not possible once the Board became operational. Planned production increases on their farms were completely

curtailed, hence full utilization of their processing plants could not be realized. These plants generally were constructed with excess capacity in the present to insure the ability to expand with the industry in the future. In most cases this expansion and consequent efficient use of the processing facilities has been an impossibility. The aggressive firms in the industry followed the only logical alternative-- acquisition of large broiler farms to insure at least a minimum of raw material for their plants. Ownership of the farms insured against the loss of live birds to competitors.

The limited industry expansion has also had its effect on hatcheries. Given a limited market to serve and relatively stable market shares for each firm,¹ competition among hatcheries declines. Price cutting by one firm may reallocate market shares to a certain extent, but retaliatory price cutting by other firms simply reduces total hatchery profits. Because there is very little potential market for additional chicks, profits can only be increased by raising chick prices or lowering costs. The latter is not appealing because lower costs are usually associated with increased volume of output, which is not possible under Board regulation of marketings.

It is clear that the operations of the Board initially disturbed the planning function of the integrators. Internal growth of these firms was no longer feasible under the restrictions of the Board. Acquisition became the only feasible method of expanding individual

¹ Market shares are relatively stable because producers usually deal with the same firm year after year as long as service remains satisfactory.

firms. The high concentration and resultant market power exhibited by one firm is the direct result of aggressively applying this alternative.

High concentration is often the result in a non-expanding industry, occurring largely because of entry barriers. It would be extremely difficult for any individual or firm to establish a new hatchery, high volume broiler farm, or processing plant in this province. Although 35 percent of new quota must be offered to new growers, the size of operation necessary for an efficient unit limits the number of growers that can enter the industry.¹ For hatchery and processing facilities there is not enough volume of trade to justify additional facilities at either level. In addition, the competitive atmosphere existing at the present time is formidable enough to discourage any ideas regarding entry.

Effects on Consumers

Consumers in Alberta are paying high prices for broilers in relation to prices paid in other provinces. The main reason for these higher prices can be traced to the Marketing Board's success, with industry cooperation, in bringing about stabilized production and prices. Alberta grower prices have been equal to the best prices received by growers anywhere in North America.² The level and stability of prices at the producer stage are reflected through the entire system to the retail level. Controlled marketing by the Board eliminated much

¹ In 1968, 100,000 square feet of new quota was established. Thirty-five percent of this figure is adequate for one specialized grower if he has no other source of income.

² H. D. Falkenberg, "Report to the Annual Meeting" (paper presented to the 28th Annual Meeting of the Alberta Federation of Agriculture, January 8-9, 1969), p. 1.

of the competition one would expect to find in the marketing system. Given a "limited" quantity of product from which to extract grower profits, processing and retail margins, cooperation among the Marketing Board, processors, and retailers is expected. All sectors of the industry must make adequate profits if the status quo is to be preserved. For example, major retail chains in Alberta very seldom feature broilers as an advertised special at bargain prices. Also, even though a large increase in imports was necessary to fulfill local demand during the summer of 1969, producer and retail prices remained remarkably constant in view of the excess demand situation. It is evident that price stability and price competition are incompatible, therefore the production stability engendered by the Marketing Board is reflected in stable but higher average prices throughout the broiler marketing system.

Competition from other provinces is expected to keep Alberta prices at a reasonable level. Although all major broiler producing provinces, with the exception of Quebec, have operating Broiler Marketing Boards, competition will exist if prices in any one province depart from the norm relevant at that time. Quebec, with its uncontrolled marketing system, has been the guardian of prices throughout Canada. It will continue to operate in this role as long as free interprovincial trade exists and a National Marketing Board is not established to balkanize the provinces. Free interprovincial trade will ensure that the stabilizing effect of the Marketing Board and the high industry concentration existing in Alberta will not have regressive price effects upon consumers.

Implications of Processor Control

The quasi-monopoly position of Firm A in the Alberta broiler industry must be viewed in the context of total marketing efficiency. Firm A is indubitably the industry leader in the province and occupies such a dominant position that exchange efficiency is nearly non-existent. However, the operational efficiency accruing to the internal organization of the firm is very high. The coordinating functions of the firm through the levels of hatcheries, production, processing, and distribution result in significant economies of scale, at a very high volume of output. Given the present Alberta demand for broilers, and the Marketing Board's policy of "just" supplying the local market, high concentration in the Alberta industry and operational efficiency are inseparable.

Operational efficiency for the industry is imperative if Alberta is to retain a competitive position in interprovincial trade. The economies of scale possible from high concentration are most evident in Quebec where four plants of the same firm process 33 percent of Canada's total production. A high degree of operational efficiency in the local industry is essential to meeting this kind of competition. The central problem therefore becomes one of mitigating local regressive effects of high concentration while retaining the benefits available from operational efficiency.

Independent producers are not in an enviable position. With very little competition remaining in the hatchery and processing stages of production, independent producer alternatives are limited. The possibility of tying arrangements pose a threat to independents' profits and to the viability of the smaller independent hatcheries. By offering

chicks and processing as a package deal only, non-integrated hatcheries will lose their business. Grower profits can be squeezed under such arrangements. When regional concentration is extreme, as it is in processing in southern Alberta (Calgary and Lethbridge markets), squeeze operations may appear very attractive to the integrator. Discriminatory pricing between independent and integrator operations is not at all necessary, as costs incurred by the integrator are internal. Assurance of a final marketing margin sufficient to cover all costs is all the integrator requires.

Control over a significant portion of the growing facilities by Firm A limits the bargaining power of the independent growers and the Marketing Board. Pressure to adjust minimum prices payable to independent growers with a view to guaranteeing a constant dollar processing margin is a real possibility. Since integrator grown birds go through the integrated process at cost, any reductions in price paid to independents enhances the integrator's composite margin. However, the threat to independent profits need not become severe if integrator control of production facilities does not increase beyond its present level. Integrators currently require independent production to maintain year-round market supplies. Thus there is still some competition for independent product, and it can continue if integrator control does not increase.

The integrated companies have been instrumental in establishing the market for broilers through their coordinating procedures. They have failed in one of the main tenets for efficiency, that is, stability for the industry. Stability in production and pricing has been obtained

and maintained by the Marketing Board with cooperation from the industry segments. The Marketing Board has succeeded in this respect where industry has failed. The nature of competition between firms in the processing industry is not conducive to stability, and the stability that could be attained through cooperation of a few firms would no doubt bring forth cries of collusion and restrictive trade practices. The Marketing Boards were established with immunity to anti-combines legislation, thus enabling the processing segment to do, through the Board, what it would not legally do in concert; that is, maintain a steady flow of product at relatively stable prices.

It is entirely necessary for the Marketing Board and the industry to cooperate on all the facets of controlled marketing. Equality in bargaining power is a necessary condition for cooperation; possession of a high degree of market power makes cooperation difficult. While it is true that market power might not be used in an adverse fashion, the history of monopoly has few heroes. Company officials and hence policies change over time; there is no guarantee that a dominant organization will not eventually exert this dominance.

CHAPTER VII

THE FUTURE OF INDEPENDENT GROWERS UNDER THE MARKETING BOARD

Of the 94 independent growers in Alberta in 1968, approximately 52 percent of them have less than 10,000 square feet of production space. Thirty-four percent have 10,000 to 20,000 square feet of broiler production area. The average size for all independent producers is approximately 12,800 square feet. The Marketing Board considers that a unit of 30,000 square feet is necessary to the independent grower whose only source of income is from broilers. Since the majority of independent growers have less than 30,000 square feet, their broiler operations are supplemental sources of income rather than major enterprises. An important question needs to be answered. "Are these small producers as efficient as the large integrated farms, or is inefficiency being perpetuated by the goals of the Marketing Board?"

The Marketing Board is a vested interest group that seeks to provide a remunerative price to producers for their product. It does so by setting marketing quotas, thereby striving to keep supply in line with demand. Control of marketing prevents the excess supply situation characteristic of many individual producers in a competitive market and thus keeps prices at a higher, more stable level than would be the case without quota control. A major contribution of the Board is the stabilizing effect it has had on grower prices.

Stability is a sufficient condition for expansion of production by independent operators. Virtually assured of a minimum price for their product, the risk and uncertainty of investment in facilities

is diminished. Credit from banks and other recognized institutions of lending is easier to obtain. Profits can be used for re-investment and modernization of facilities. Elimination of "boom and bust" production allows concentration on production efficiency and specialization in technique, as well as the benefits derived from long-range planning. These considerations speak well for the results of the Marketing Board.

The accusation that Marketing Boards foster and perpetuate inefficiency in production by unduly enhancing price may have value when production is geographically limited and close substitutes are lacking. While it is true that broiler prices in Alberta will not rise much above price plus transportation charges from other provinces, the local price may not reflect the efficiencies that may be attained in broiler production. The minimum price assurance to growers may reduce the desperation incentive to expand and realize economies of scale; that is, smaller units will not become uneconomic if expansion does not occur, as would be the case if supply and price were to adjust to their "free" level. Large absolute size has long been insurance against uncertain market conditions. Facilities can be used to capacity in favorable periods, and production can be reduced in adverse times. The latter alternative is not usually available to the small producer as his "shut-down" point occurs at a higher level than for the larger operator.¹ The individual with the small unit is also usually short of working capital, and lacks the credit sources necessary to carry him

¹ The shut-down point refers to the output at which price per unit of output no longer exceeds average variable costs. Small producers usually have higher average costs than large producers; therefore, only a small decrease in price is necessary for the small operation to become unprofitable.

over the price recessions. The vertically integrated structure clearly has an advantage in this respect, as the possibility of pooling profits and losses through the various stages limits the absolute loss from any one phase of the integrated process.

When relative price stability becomes a factor, as it definitely has under the auspices of the Board, possession of a large operation is no longer necessary to guarantee survival. As long as prices are maintained above some certain level, all producers can have profitable operations. The relationship of this price level to the relevant costs of production is a major determinant of the efficiency question.

Production Efficiency, Costs, and Returns

The data used for this study relating to production costs and returns to Alberta broiler growers is taken from the Broiler Cost Comparison Study, a continuous survey carried on by the Poultry Branch, Alberta Department of Agriculture. The data covers 57 individual lots of broilers of various sizes produced during the period March 1968 to May 1969. Size is measured by number of birds sold; the smallest lot contained 1,012 birds, the largest 29,525, with the average size being 9,830 birds sold. Average bird size per lot varied from 3.06 to 4.70 pounds; the overall average being 3.91 pounds. Feed conversion ranged from 2.06 to 3.11, mortality from 0.5 percent to 13.6 percent, and rejects from 0.2 percent to 5.5 percent. Since the common production practice is to maintain only one age of bird on broiler farms, lot size is highly correlated with housing capacity. Firms were grouped according to number of birds sold in order to examine the effects of farm size (capacity) on production efficiency and costs and returns.

Table 8

RELATIONSHIP OF FLOCK SIZE TO EFFICIENCY CRITERIA, ALBERTA,
MARCH 1968 - MAY 1969

Efficiency Criteria	<4,000	4,000- 7,000	7,000- 10,000	10,000- 15,000	15,000+
Number in group	11	12	12	12	10
Average number of birds sold	3,246	5,365	8,318	12,337	21,214
Age when sold (days)	65.45	63.58	62.92	62.25	63.9
Percent livability	93.0	94.1	94.5	94.5	93.9
Feed conversion	2.71	2.41	2.43	2.48	2.50
Average weight per bird	3.72	4.15	3.81	3.94	3.94
Percent grade A	91.94	91.90	89.73	92.56	87.61
B	7.05	7.45	9.06	5.81	11.40
Reject	1.03	.65	1.21	1.63	1.09

An examination of the figures presented in Table 8 reveals no particular relationship between size and the criteria. When flock size was correlated to these variables (Table 9), percent livability, average weight per bird, percent Grade B, and percent rejects were all positively correlated. Feed conversion was negatively correlated with size. Thus producers with larger flocks had slightly higher livability ($r = 0.12$), better feed conversion ($r = -0.19$), and marketed slightly heavier birds ($r = 0.04$). They also had more grade B birds and rejects ($r = 0.23$ and 0.16 respectively). The low correlations indicate relatively little advantage to be gained in physical efficiency by increasing lot sizes over 10,000 birds.

Data relating to costs and returns are given in Table 10. The figures making up variable costs are complete; the fixed charges and labor are not strictly comparable because not all respondents included these estimates. The number of lots from which the latter figures are derived are as follows:

Group 1 - 5 respondents

Group 2 - 9 respondents

Group 3 - 8 respondents

Group 4 - 10 respondents

Group 5 - 9 respondents

The evidence in Table 10 would indicate that most cost economies can be realized with lots in the 10,000 - 15,000 bird category. Labor costs per pound of bird decrease through all size groups. Feed costs remain relatively constant after declining substantially from the first to second size category.

The high depreciation and investment interest allowances in the last group would indicate over-investment in facilities not related to cost savings. The low per pound selling price realized by this group can be accounted for by the large proportion (11.40 percent) of Grade B birds. Broiler lots in the smallest size category just covered costs at the prices that prevailed during the study period.

An analysis of the cost and return figures indicates that the most profitable lot size is 10,000 to 15,000 birds--the fourth category. The majority of growers do have close to 10,000 square feet. With the policy of the Marketing Board being to allot new quota on a priority basis to independent growers, all growers can expand to this size of

Table 10

COSTS AND RETURNS FROM BROILERS BY GROUP SIZE, ALBERTA,
MARCH 1968 - MAY 1969

Cost Item	Size of Flock				
	<4,000	4,000- 7,000	7,000- 10,000	10,000- 15,000	15,000+
	(cents per pound)				
Chick	4.199	3.622	3.887	3.361	3.828
Vaccination and medicants	.089	.277	.068	.208	.273
Litter	.027	.070	.062	.075	.038
Feed	11.785	11.172	11.262	11.324	11.075
Brooding	.355	.459	.281	.340	.381
Electricity	.299	.271	.187	.183	.230
Cartage and/or loading labor	.539	.613	.472	.469	.608
Variable costs	17.223	16.484	16.219	15.960	16.433
Depreciation, buildings and equipment	.804	.778	.686	.644	.860
Interest on investment	.766	.717	.611	.613	.752
Labor	2.522	1.617	1.246	1.268	.898
Insurance and taxes	.142	.224	.176	.158	.196
Other*	.200	.200	.200	.200	.200
Total costs	21.657	20.020	19.138	18.843	19.339
Selling price	21.669	21.863	21.933	21.787	21.309
Net	.012	1.843	2.795	2.944	1.970

* Includes A.B.G.M.B. deduction.

operation if they so desire. One hundred thousand square feet of new quota were made available to producers for 1969. New growers received 38,000 square feet, leaving 62,000 square feet for existing producers. Sixty-two thousand square feet is equivalent to increasing the capacity of 20 growers by 3,000 square feet each.¹ Thus all growers that were in Category I (less than 4,000 birds marketed) could move to Category 2, and some from the second size group could move to the third group. Given past trends in demand for broilers and consequent increases in new quota, a period of a few years should see all growers with 10,000 square feet or more.

The Marketing Board has the power to set minimum prices to be received by producers for broilers marketed. Marketing quotas are also determined to keep this price realistic with supply-demand conditions. Table 10 gives the total costs for Categories 2, 3, and 4 as 20.020, 19.138, and 18.843 cents per pound, respectively, for an average of 19.334 cents per pound. Selling prices per pound for the same categories give an average selling price of 21.861 cents per pound. The difference between selling price and total costs is therefore 2.527 cents per pound of bird sold, which is net profit to the grower. Consider the average weight per bird to be 3.8 pounds, production facilities capable of housing 10,000 birds and a turnover of five separate flocks per year. Simple multiplication gives a yearly profit figure of:

$$2.527\text{¢/lb.} \times 3.8 \text{ lb./bird} \times 10,000 \text{ birds/lot} \times 5 \text{ lots/year} \\ = \$4,801.30.$$

¹ Marketing Board policy is to use a standard unit of 3,000 square feet as the basis for quota increases. These unit quotas are first offered to existing producers in the lowest size category, then to producers in the second size category, etc., until all producers have received an increase of 3,000 square feet at which time the smallest producers will be eligible for a second increment.

If investment in buildings and equipment equals \$3.00 per square foot (less for plywood structures) for a total investment of \$30,000, the yearly return on investment is 16 percent. If costs and returns are similar for a 30,000 square foot operation, profits would be \$14,400 per year. Considering that 30,000 square feet is still a one-man operation, broiler growing under the Marketing Board is a profitable business.

Increases in flock size are usually obtained by replication of similar facilities. While most physical economies and cost savings appear to be exhausted at the 10,000-15,000 square foot level, total revenue can be enhanced by duplicating production units. Therefore, large integrated units are not necessarily more efficient in production, neither are they expected to show significant cost advantages. Production techniques generally are similar and universally known thus are available to independent and integrator alike. Even though integrated growing facilities are much larger than independent producing units, the comparison to be made is a 10,000 square foot independent unit with ten or fifteen, 10,000 square foot integrated production units. It is doubtful if many pecuniary economic advantages would accrue to the latter. In the range of 12,000 square feet of production area, the economies of scale curve is essentially horizontal and would be very similar for both independent and integrator.

The impetus for ownership of large growing facilities by the processors can be explained partially by the capacity of existing processing plants. A major advantage of coordinating the production process involves elimination of excess capacity and/or bottlenecks at the

various stages. Excess capacity at the processing stage requires increased production at the growing level. Thus large processing plants govern the minimum horizontal scale at the growing stage necessary for efficiency in the overall process. It should be noted that this production need not come from their own growing facilities; it can be supplied as well by independent growers given the necessary timing of delivery.

A Note on Demand Estimation

The magnitude of profitability accruing to broiler growers through Board control of marketings requires comment. The Board's major objective is to maintain stable prices at a level which will be remunerative to growers. The rationale is to increase supply at a level commensurate with increased demand. As such, the role of price in demand analysis is essentially ignored, that is, there are no expectations formulated regarding the changes in quantity demanded due to price changes because the objective of setting marketing quotas is to keep price constant. Only demand changes occurring through population changes, incomes, seasonality of demand, and changes in the prices of competing products are used in the analysis of supply decisions.

A major improvement in the demand analysis done by the Marketing Board would involve determination of the demand elasticity for broilers at the farm and retail level. Several studies have indicated that the elasticity of demand for broilers is greater than one.¹ Positive evidence that this theory holds for the Alberta market would indicate that supply expansion with concomitant lower prices would

¹ Refer to page 42 of the text.

benefit rather than hinder the industry. Total revenue to the industry would be increased because the percentage increase in quantity demanded would be greater than the percentage decrease in price. Consumers would benefit by receiving a quality product at a lower price, and the Alberta industry would become more competitive interprovincially.

Research into the relationship between farm and retail prices of broilers is required to verify the advisability of production expansion. Demand for broilers at the retail level may be price elastic, but if marketing margins are based on a constant percentage mark-up, demand at the farm level may well be inelastic. Production expansion beyond that required to fulfill regular increases in demand could then lead to lower total revenue for the growing segment of the industry. However, if marketing margins are based on a constant absolute mark-up, the price elasticity at the retail level will be reflected back to the grower level. Production expansion with simultaneous lower prices will then be feasible, with consequent improvement in total revenue for the entire industry.

The degree of sophistication necessary for the analysis suggested above may not be feasible due to present data limitations. Complications are evident in comparing grower prices with retail prices of the product; the product is essentially homogeneous at the farm level, while at the retail level it appears in varied form--whole frozen broilers, cut-up, parts, ice-packed fresh, in addition to broilers specifically for the drive-inn trade. Costs and mark-ups vary for each of these final products, making it extremely difficult to specify a composite margin extracted from the raw material. An additional

complication results from the relative stability of prices at the grower and retail level. The attempt to use price as an explanatory variable of quantity demanded when price remains constant meets with limited success. Constancy of prices, in effect, does not allow determination of the coefficient of elasticity, a critical component of demand estimation strategy.

While realizing the difficulties inherent in demand analysis, the role of price should not be minimized as a working tool of the Board. Stability of prices is commendable, but only when complemented with a reasonable level of prices. Reductions in price have been used primarily to meet outside competition, and/or to reduce excessive storage stocks. When cost considerations are favorable or profits are substantial, price reductions could also be used for industry expansion. Purposive growth of the industry can be expected to reinforce the goal of price stability and at the same time act as a ceiling to the price level.

CHAPTER VIII

INTERPROVINCIAL COMPETITION IN THE BROILER INDUSTRY

There are no restrictions to trade in broilers between provinces. Free movement of broilers allows processors to ship products to any market in Canada where a price differential sufficient to cover costs of transportation exists. Broiler Marketing Boards are in operation in all major broiler producing provinces with the exception of Quebec. Marketing Board policies combined with the structural organization of the industry in each province define the relative competitiveness of the provinces in broiler trade.

Alberta has traditionally been a net exporter of broiler chicken. Figures by month and year for exports and imports covering January 1965 to December 1969 (Table 11) indicate that Alberta has recently become a net importer of broilers.¹ The Marketing Board began operation in September 1966. It is interesting to note that for the years 1967, 1968, and 1969, Alberta imported more product than was exported. Part of this trend was the result of the formation of Broiler Marketing Boards in Saskatchewan and Manitoba. Boards traditionally strive to fulfill their markets with local production, which both Boards did, causing Alberta to lose much of its export total. However, controlled marketing has probably resulted in the elimination of some export

¹ Import figures cover all processed product originating outside of Alberta's geographical boundary. Export figures are based on a marketing area concept, and this area includes Alberta and parts of British Columbia and the Northwest Territories. Exports include only that product which goes out of the normal market area.

Table 11

NET EXPORT OF ALBERTA BROILERS,
JANUARY 1965 - DECEMBER 1969¹

Month	1965	1966	1967	1968	1969
(thousand pounds)					
Jan.	107	65	117	-31	-176
Feb.	118	51	-93	-18	-291
Mar.	0	-55	-111	103	-177
April	35	23	-41	37	-49
May	38	-15	35	-26	-275
June	88	-29	162	123	-729
July	87	-127	-142	6	-545
Aug.	49	-244	-135	-110	-181
Sept.	43	12	106	98	-99
Oct.	46	153	-1	-105	-341
Nov.	89	84	48	-145	-277
Dec.	68	135	38	-113	-166
Total	768	43	-17	-181	-3,306

¹ Net Export = Exports - Imports.

SOURCE: Alberta Broiler Growers' Marketing Board,
"Records of Imports and Exports,"
(unpublished).

business. Inability of Alberta processors to supply out-of-province commitments leads to loss of these markets by default. Markets once lost are seldom regained.

Imports have been increasing while exports have diminished. Some imports are the result of transfers of products between the plants of companies operating in more than one province, which may or may not be caused by deficit or surplus conditions in the areas concerned. It is evident that, on balance, Alberta has not been meeting the requirements of its local market. Continuation of this trend will allow other provinces to use Alberta as a market for their surplus production.

Quebec is the only major broiler producing province with unregulated marketing. In 1968, Quebec supplied nearly 40 percent of the Canadian market, with one firm doing 75 percent of this business through its four processing plants. Quebec's industry thrives because of substantial vertical integration originating at the feed manufacturing level, prominence of fee-basis growing,¹ and economies of scale in processing aided by a relatively low wage structure. Absence of a Marketing Board in Quebec allows this province to overproduce consistently its local requirements, and the low cost structure of production allows Quebec broilers to be competitive across Canada. Alberta is fortunate in having a four cents per pound transportation charge on Quebec shipments to Alberta, but this charge yields little consolation when Alberta is underproducing its own market. The logical solution to

¹ Fee-basis growing is an arrangement characterized by feed company ownership of broilers and feed, and the grower is paid a nominal fee per bird for his labor and management.

maintaining local markets is to back surplus production to its source. Alberta is in a favorable position to do this, as producer profits are good, feed costs are favorable, and the processing capacity is available.

Alberta's dubious distinction of having the highest broiler prices on the North American Continent deserves some serious questioning. The broiler industry is justifiably expansion minded. Marketing Boards have positive attributes, but they too must think of expansion. The industry is not best served by inducing artificially high prices at the expense of lost markets. Hatcheries, producers, and processors have more to gain by expanding their markets and accepting lower prices for their products. The multiplier effect of the extra income generated through increased use of Alberta's resources in fulfilling local demand through local production rather than imports must be considered.¹ Benefits will thus be distributed within the province, rather than flowing out of the province.

Cooperation between the Marketing Boards of various provinces is desirable up to a point. Strict division of markets between provinces would be disastrous for the Alberta situation. The possibility of a National Broiler Board balkanizing the country into discreet, separate markets must also be avoided. With the quasi-monopoly situation as it exists in Alberta, independent producers, independent

¹ Loss of feed resource use alone from the 3.3 million pounds of imports is estimated to be 5,500 tons. Given lower consumer prices for broilers and an even balance of imports and exports, the estimated increase in Alberta broiler production of 5 million pounds would use an additional 7,800 tons of local feed grains.

hatcheries, and several feed companies could not possibly remain viable. Consumers would be paying prices not justified by the costs of production and marketing. Retailers would be forced to purchase their requirements from the distributor that processes 81 percent of Alberta's production as alternative supply sources would be closed.

Alberta can and must regain and maintain its net export position. Industry profits will be lowered in the short-run, but long-term growth and survival of the industry in Alberta is a more important consideration. It is imperative that hatcheries, producers, processors, and the Marketing Board realize this economic fact of life and cooperate in achieving this goal.

CHAPTER IX

POSSIBLE REGULATION FOR THE INDUSTRY

The structure of the broiler industry in Alberta has reached a degree of concentration where the price mechanism may no longer be adequate to ensure proper allocation of resources and reasonable distribution of income. The Firm A-B complex exhibits a very high degree of market power through its vertically coordinated operation over hatcheries, production, feed manufacturing, and processing. Significant control of hatcheries (79 percent) and processing (81 percent) implies minimum competition locally. However, it is not at all evident that total marketing efficiency (exchange efficiency plus operational efficiency) has deteriorated through increased concentration in the industry. The operational efficiencies attained through high volume production and vertical coordination at all levels of the production process have partially offset possible deficiencies in exchange efficiency.

Maintaining a high standard of performance in the industry requires a policy whereby the exchange efficiency existing in the present market can be perpetuated without restricting further gains in operational efficiency. Locally, concentration may already be too high to ensure reasonable exchange efficiency. As pointed out by the Economic Council of Canada:

... lack of strong competition in a company's product market increases the risk of sloppiness, poor use of productive resources, and excessive production and distribution costs. An environment is created in which both waste and a comfortable, if not necessarily spectacular, profit margin can persist, undisturbed by clear and urgent signals from the market.¹

¹ Economic Council of Canada, Interim Report on Competition Policy (Ottawa: The Queen's Printer, July 1969), p. 8.

A high degree of operational efficiency in the industry is necessary to meet competition from other provinces and to ensure adequate growth of the local industry. The policy of maintaining exchange efficiency without restraining operational efficiency can be examined in the context of existing legislation. There are three major Acts to be considered, these being: (1) the Combines Investigation Act, (2) The Cooperatives Associations Act, and (3) the Marketing of Agricultural Products Act.

The Combines Investigation Act

Canadian anti-combines legislation is found entirely in the Combines Investigation Act, a statute of the Parliament of Canada. Generally it prohibits three broad classes of conduct, these being:¹

(1) Combinations that prevent or lessen unduly competition in the production, purchase, sale, storage, rental, transportation, or supply of commodities, or in the price of insurance;

(2) Mergers or monopolies that may operate to the detriment of the public;

(3) Unfair trade practices including price discrimination, predatory pricing, certain promotional allowances, misrepresentation of the regular price and resale price maintenance.

The rationale underlying the legislation proposes the perpetuation of a free enterprise economy in which those desiring to do so may compete for economic gain unhindered by artificial restraints imposed

¹ Precise statements of these offences are contained in sections 2, 32, 33, 33A, 33B, 33C, and 34 of the Combines Investigation Act, R.S.C., 1962, c. 314 (Ottawa: Queen's Printer).

by other members of the industry. Essentially the laws endeavor to regulate industries through the maintenance of competition rather than regulation by the members of the industry itself. It is not enough that industry's performance is satisfactory with respect to prices, quality and quantity of product, and progressiveness, but this performance must be imposed by the competitive forces of the industries. In this way society is assured that the performance of industries is the result of individual firms pursuing their best alternatives.

Anti-combine legislation in Canada is a part of the criminal law. Therefore the onus is on the prosecution to prove beyond a reasonable doubt that an offence has been committed and the accused is presumed innocent until proven guilty. There are no civil proceedings available and no provisions for the awarding of damages. There are no civil proceedings available for obtaining a cease and desist order, although such alternative is available through the appropriate criminal channels. Furthermore, there is no legislative authority conferred on administrators to regulate any aspect of industry. Enforcement of legislation therefore hinges on whether or not there is an offence. The lack of a supervisory body for any business or industry causes legislation to act after the fact, rather than in a preventative manner.

Legislation With Regard To Mergers

Merger and monopoly activities are covered under Section 33 of the Combines Act. Combined with section 2 (e) and (f) of the Act, it provides:

33. Every person who is a party or privy to or knowingly assists in, or in the formation of, a merger or monopoly is guilty of an indictable offence and is liable to imprisonment for two years.

2. In this Act,

...

- (e) 'merger' means the acquisition by one or more persons, whether by purchase or lease of shares or assets or otherwise, of any control over or interest in the whole or part of the business of a competitor, supplier, customer or any other person, whereby competition
- (i) in a trade or industry,
 - (ii) among the sources of supply to a trade or industry,
 - (iii) among the outlets for sales of a trade or industry,
 - or
 - (iv) otherwise than in subparagraphs (i), (ii) and (iii),

is or is likely to be lessened to the detriment or against the interest of the public, whether consumer, producers or others;

- (f) 'monopoly' means a situation where one or more persons either substantially or completely control throughout Canada or any area thereof the class or species of business in which they are engaged and have operated such business or are likely to operate it to the detriment or against the interest of the public, whether consumer, producers or others, but a situation shall not be deemed a monopoly within the meaning of this paragraph by reason only of the exercise of any right or enjoyment of any interest derived under the Patent Act, or any other Act of the Parliament of Canada;¹

To date, enforcement of Section 33 with a view to preventing particular acquisitions has been relatively unsuccessful. The courts make no pretense of striking down monopoly per se but do provide that abuse or potential abuse of monopoly will constitute an offence. Thus it is the conduct of the monopolist rather than monopoly structure that is attacked. It is also apparent that mergers are carefully

¹ Canada, Combines Investigation Act, R.S.C. 1952, c. 314 (Office Consolidation), p. 3, 17.

scrutinized only when they result in very extreme concentration in a particular industry.

Tying arrangements have no specific reference in the Combines Act. They are not per se violations as they are in Section 3 of the Clayton Act (U.S.A.). Under existing legislation, they would be dealt with as an aspect of monopoly power. The extent to which such arrangements were used would determine if such conduct was "unduly" lessening competition and if action under Section 33 of the Act would be justified.

Cooperative Legislation

Special controls for a number of aspects of the economy occur in the form of statutes or regulations at both federal and provincial levels. Where valid legislation for some aspect of industry has been superimposed upon the competitive structure, it is generally considered that the Combines Investigation Act does not apply. Cooperative organizations are incorporated under special provincial statutes. In Alberta the Cooperative Associations Act (1955) allows any ten or more persons to associate themselves together as a cooperative organization with the objects of:

11 (a). purchasing, procuring, selling, exchanging, hiring and dealing in goods, wares and merchandise by wholesale or retail, and preparing, producing, processing and manufacturing the same;

(b). collecting, receiving, marketing and processing livestock, farm products or fish delivered to it by its members or patrons and handling, finishing, packing, canning, grading, and storing the same, and manufacturing the same into other commodities.¹

¹ Alberta, The Co-operative Associations Act, R.S.A. 1955, c. 59 (Office Consolidation), p. 4.

Historically agricultural cooperatives were encouraged as a means of gaining bargaining power for their farmer members. Cooperatives were believed necessary when the atomistic producing sector faced the oligopolistic purchasing sector. By associating themselves into a common denominator, the producers could wield effective countervailing power thereby improving their market position. Economic advantages in the form of increased returns were allocated to members on a patronage share basis.

The general public acceptance of cooperative marketing enabled these cooperative associations to acquire powers not legally available to ordinary business. In effect, the cooperative legislation encourages control of the specific industry with resultant market power by giving cooperatives:

12 (c). The power to acquire or undertake the whole or any part of the business, property and liabilities of a person, company, association or society, wheresoever incorporated, and carrying on any business that the association is authorized to carry on, or possessed of property suitable for the purpose of the association.

12 (p). The power to enlarge the area of its operations by establishment of branches or other means.¹

Of course, other firms in the industry can acquire other businesses and enlarge their market areas. They are, however, subject to anti-trust and merger legislation, which should limit their alternatives to a degree. Cooperatives apparently do not have any such deterrents to expansion or control of the industry. The extent to which the powers of 12(c) and 12(p) of the Cooperative Associations Act can be used has not yet been tested in Canadian Courts. It is highly problematical that

¹ Ibid., pp. 5, 7.

cooperatives should be exempt from anti-trust when their scale of operations equals or exceeds that of similar firms operating in the industry. According to Youde and Helmberger the U. S. Supreme Court has taken the following view of cooperatives:

- (1) Cooperative associations may not legally act in concert with profit seeking businesses and other non-cooperative agents in the quest for market power.
- (2) Attempted monopolization through predatory, exclusionary and anticompetitive practices does not come under the protective wing of Capper-Volstead.
- (3) Where the effect of acquiring the assets of or merging with a competitor is substantially to lessen competition, a cooperative organization would appear vulnerable to anti-trust attack much as would any firm.¹

Canadian courts would set their own precedents as cases of cooperative monopoly or combine action came before them. Prosecution would probably not occur for two major reasons: (1) Courts have been characteristically lenient in dealing with merger activity, and (2) the traditional view of the cooperative as a necessary organization for farm producers. There would likely be conflict between the Cooperative Act and the Combine Investigations Act. The two laws could not be mutually exclusive if a cooperative were accused of monopoly behavior. As a matter of policy the Director of Investigation and Research, Combines Investigation Act, would be well-advised to include cooperative's goals and means in his program for compliance.² Cooperatives

¹ J. G. Youde and P. G. Helmberger, "Marketing Cooperatives in the U.S.: Membership Policies, Market Power, and Antitrust Policy." Journal of Farm Economics, Vol. 48, No. 3, Part II (August 1966), p. 33.

² The program for compliance is designed to encourage businessmen to voluntarily discuss their problems with the Director of Investigation and Research before introducing policies which might prove to be in conflict with the Combines Investigation Act.

are essentially a group of self-selected capitalists seeking to improve their economic position in a competitive society. When they become a dominant force in any particular industry, they should be subject to the same controls as private firms. They have arrived, so to speak, and no longer need or deserve the preferential treatment bestowed upon them by the Cooperatives Act.

The Marketing of Agricultural Products Act

Farmers and farm groups have often pressured for organized marketing of their products. Marketing boards and commissions have been given legislative sanction and a broad range of powers to "provide for the promotion, control and regulation, in any or all aspects of the marketing of agricultural products within the province."¹ Producer marketing boards are a practical means of organizing producers into an effective countervailing force in a market where there are few buyers. Where quotas and price setting are available to the Board, they can effectively stabilize prices and incomes to producers in the short-run. Long-term effects on efficiency of production and industry growth are less determinate and depend largely on the policies adopted by the boards.

The Marketing of Agricultural Products Act (Alberta, 1955) is administered by the Alberta Agricultural Products Marketing Council which acts as supervisor and regulator in the organization and operation of the producer boards. The Council has established an Industry Advisory Committee composed of three members of the Alberta Broiler Growers' Association, two members of the Alberta Egg and Poultry Association,

¹ Alberta, Marketing of Agricultural Products Act, R.S.A. 1955 (Office Consolidation), p. 2.

one member of the Alberta Division of the Canadian Feed Manufacturers' Association, and one member from the Alberta Poultry Hatchery Association. The purpose of the Committee is to review and advise the Board regarding problems and issues related to various segments of the broiler industry and regarding marketing quotas and prices payable to producers for the regulated product. The producer boards are established with the view to promote, regulate, and control, in any or all aspects, the marketing of their specific product. The boards obtain virtual monopoly power in the province with respect to the product, subject only to the supervision of the Council and the advice of the Advisory Committee.

Providing a vested-interest group with monopoly control of a product raises serious questions regarding regressive effects on consumers, inefficiency of resource use through quotas, and barriers to entry of new producers. It is possible consumers pay more because of the presence of the Board, although the Board is limited in its asking price by the free interprovincial trade in broilers. The effects of quotas cannot be determined precisely. Little is known about their real effects on stability, income distribution, and economic growth. The stabilizing effect of planned production reducing price uncertainty may lead to greater production efficiency, which may be counteracted by the price increasing effect of restricted production enabling inefficient producers to remain viable. The overall effect, whether positive or negative, remains conjectural. Entry barriers, while present, need not be a serious problem in a growing industry. The Board's policy of allocating 35 percent of new quotas to new growers ensures some entry.

As long as total quota can be increased, new growers will have the opportunity to produce broilers. The relevant question then concerns the alternatives of free entry versus controlled entry, which reverts to the initial question of quota restriction versus uncoordinated production. The available evidence greatly favors the former alternative.

Alternatives for Regulation

The present situation in the Alberta Broiler industry may be summarized as follows: (1) very high concentration at the processing and hatchery stages, (2) a high degree of market power exhibited by one firm through its integrated structure, (3) the one firm in question is a producer's cooperative, which theoretically exempts it from anti-trust legislation, (4) a producer marketing board that is slowly losing its bargaining power through processor acquisition of growing facilities, (5) quasi-monopoly through the marketing board, and (6) overpricing of the final product resulting from underexpansion at the growing level which in turn leads to excess capacity at the processing level.

The view is taken that the high concentration and market power attributable to the merger of Firm A and B is not conducive to the proper functioning of the exchange mechanism. The problem becomes more severe as the processors involved extend their holdings of production facilities. The Marketing Board loses much of its effectiveness as a regulator of prices and production when much of the raw product is controlled by the processor. It is evident that some controls are necessary to ensure some minimum of exchange efficiency in the local market.

It is doubtful if anti-combine legislation would succeed in opposing the merger. A merger is assessed by focusing attention on the extent to which competition (not necessarily competitors) remains after the acquisition takes place. The following factors need to be considered:

- (1) Substitutes: Broilers are in constant competition with red meats for the consumer's dollar. Given ceteris paribus beef and pork prices, consumption of poultry may be expected to decline with increases in poultry prices.
- (2) External Competition: Free movement of broilers between provinces limits price increases within the province.
- (3) Concentration: The industry was concentrated before the merger, concentration is now very high. Of greater significance is the relative size of remaining competitors, in this case the size differential between the acquiring firm and its rivals is large.
- (4) Entry Barriers: The vertically integrated structure makes entry into the hatchery and processing stages very costly, as both phases plus supply of product must be assured. The merger represents a formidable competitor to any entrants at either level.
- (5) Remaining Competition: Competitors remaining in the market are likely to be ineffective.
- (6) Acquiring Firm Growth: Firm A has of late primarily used mergers rather than internal growth as a source of expansion.
- (7) Economies of Scale: There is probably some evidence of economies of scale in processing due to the merger but little, if any, change in the operation of hatcheries and growing facilities. Some economies may become evident through improved managerial ability.

Factors three, four, five, and six would appear to be in favor of dissolution of the merger, while factors one, two, and seven would indicate no action necessary. In view of the merger cases that have been tested by the courts, the firm in question would probably be acquitted. The cases that have received judicial decision resulted in the accused being acquitted. In Regina versus Canadian Breweries Ltd., provincial control through the liquor boards was deemed sufficient for protection of the public, and, in addition, the 50 percent of total Canadian business in brewing did not represent undue control.¹ In Regina versus British Columbia Sugar Refining Company Ltd., et al., even though the merger with Manitoba Sugar Company Ltd. resulted in a virtual monopoly of sugar refining in Western Canada, no action was taken because of the potential threat of competition from Eastern Canada refineries.² The Restrictive Trade Practices Commission in analyzing the merger of Canada Packers with Calgary Packers Ltd. and Wilsil Ltd. recommended that an attempt be made to dissolve the mergers, or to obtain an injunction prohibiting further acquisitions.³ However, no action was taken after legal counsel indicated that legal proceedings would be unlikely to succeed.

¹ D. H. W. Henry, Q.C. (Director of Investigation and Research under the Combines Investigation Act), Address to the New York State Bar Association, Antitrust Law Section, New York, Jan. 30, 1964 (mimeo), p. 23.

² Ibid., p. 24.

³ Restrictive Trade Practices Commission, Report Concerning The Meat Packing Industry and the Acquisitions of Wilsil Ltd., and Calgary Packers Ltd. by Canada Packers Ltd. (Ottawa: Queen's Printer, 1961), pp. 428-30.

The attitude taken by combines legislation in preventing abuse of monopoly power rather than monopoly per se warrants close scrutiny of the business actions of the firm in question. Any exclusive dealing, tying arrangements, or refusals to deal should be thoroughly investigated. Predatory pricing or price discrimination are offences that must be prevented to maintain some elements of competition and fair dealing. It is more probable that legitimate accusations of the foregoing activities would succeed in court than would a simple statement of merger detrimental to the welfare of the public.

The powers given to cooperatives by legislative authority should not be construed to mean immunity from prosecution if these powers are abused. The usual thesis that cooperatives are voluntary member organizations developed for the benefit of the producer members loses much of its impact when membership occurs through lack of alternatives. Any producer who makes use of the marketing facilities of the cooperative association becomes a member without voting rights for that current year. If no other facilities are available to producers, they become members of the association through compulsion rather than choice. Such is the case in southern Alberta where the Firm A-Firm B combination controls nearly all processing facilities. This position is stated by Youde and Helmberger:

Even though a monopoly position may be achieved through voluntary growth in membership, this is no less disconcerting than in the case where a profit-seeking enterprise ends up with monopoly through no "fault of its own." Except where economies of scale dictate high levels of concentration, there seem to be no convincing reasons why monopoly in the guise of cooperation should be allowed to flourish.¹

¹ J. G. Youde and P. G. Helmberger, op. cit., p. 34.

Given the view that Combines legislation will have minimal effect in modifying the insidious growth of market power by the vertically integrated firm, attention must be turned to the special statutes of the province, specifically the Marketing of Agricultural Products Act. To reiterate, the purpose of the Act is to provide for the promotion, control, and regulation, in any or all aspects, of the marketing of agricultural products within the province. It can only control and regulate the marketing of broilers if it is able to maintain control over a substantial percentage of the product. As a board set up mainly for the benefit of the independent producer, it now has to contend with integrated firms that control 44 percent of broiler output.

The case for limiting the expansion of Firm A and B into the growing process lies primarily in the effort to forestall total control of the industry. As long as these processors require independent product they will presumably be willing to negotiate on such matters as producer prices, product requirements, and processing margins. While the integrators may be dominant in the hatchery and processing stages, they are willing to cooperate to a degree with the Board. The erosion of this cooperation is a distinct possibility if growing facility acquisitions are not impeded.

The Act is not clear with regard to the powers that may be used to prevent quota transfers and resultant quota control. As stated earlier (p. 4), section 7 (1) 12 provides for

(iii) the refusing to fix and allot to any person a quota for the marketing of a regulated product for any reason the Council considers proper

(iv) the transferability or non-transferability of quotas and prescribing the conditions and procedures applicable to the transfer of quotas.¹

These powers have been delegated to the Marketing Board pursuant to the approval of the Marketing Council. While the producer board itself is bound by Section 16, subsection 2: "No producer board shall, in the exercise of its functions under this act, discriminate against any producer to the unjust advantage of any other producer or producers.",² the Marketing Council may refuse a transfer of quota if it considers this transfer detrimental to the performance of the industry or not in the best interests of the public. It may also provide for the non-transferability of quotas. Thus it has the power to fix the total quota of any person at some prescribed level by refusing to transfer additional quota to that person. This power should be exercised with respect to the Firm A and B complex. Their respective quota allotments should be frozen at present levels, thus having the effect of reducing the total percentage control of these two firms over time as the total quota allotment is increased. There will be opposition to this proposal from the processors in question with respect to maintaining adequate volume of their plants. This problem should not arise if Board-processor cooperation ensures that there will be sufficient volume of product from independent growers.

The legislation regarding quota control by integrators must be made flexible. Straight percentage limits to quota control by individual

¹ Alberta, Marketing of Agricultural Products Act, R.S.A. 1955 (Office Consolidation), p. 6.

² Ibid., p 17.

and group integrators introduces rigidity into a dynamic situation. Decisions regarding transfer or non-transferability of quotas should be made on a case by case basis. This procedure will allow consideration of changing competitive positions in the industry. It will also give the processors an opportunity to attempt to justify further acquisitions based on economic criteria.

It will be necessary to guard against integrator acquisition of quotas in cases where no actual transfer of quotas is necessary. Quota control of this nature occurs when acquiring firm X purchases the shares of company Z to gain control. Company Z retains the quota, but it is effectively controlled by firm X. Therefore, it may be necessary to tie the quota to the owner or company shares, and changes of ownership or changes in shareholding would indicate a change in quota control. These changes of quota ownership would then require Board and Council approval. The Board must have full control over the quota to prevent trading in quota and must continue its policy of issuing quotas to new growers at no cost. Free quotas will alleviate the tendency to capitalize a value for quotas into the fixed factor of production.

In addition to eliminating further acquisitions of growing facilities by Firm A-B, some thought may be given to dissolving the merger. The merger does represent a cause of concern to the industry, but dissolution is not desirable given present circumstances. Alberta must compete with other provinces, and high concentration in Alberta is conducive to strong competition on an interprovincial basis. If barriers to free interprovincial trade in broilers are erected or if the Firm A-B complex flagrantly abuses its market power to the detriment of independent

firms in the industry, dissolution of the merger may become inevitable. Notwithstanding the above alternative, further growth of Firm A by acquisition of hatchery and processing facilities within Alberta or outside the province should be prevented. Similarly any attempts by large out-of-province companies to acquire an interest in Firm A must be carefully scrutinized.

The activities of the Marketing Board must be closely supervised. While the Board is primarily for the benefit of independent producers, it cannot neglect its responsibilities to the industry and to consumer welfare. Periodic examination of growers' returns is necessary to ensure that excessive net returns to investment are not being capitalized into quota values. The Marketing Board must ensure that the requirements of processors are fulfilled with local production so that imports are not necessary. Long-term stable growth of the industry in the province must be the ruling consideration, and all segments of the industry will need to cooperate and work together to achieve this end.

CHAPTER X

CONCLUSIONS AND RECOMMENDATIONS

The broiler industry has witnessed a period of phenomenal growth since its conception in response to expanding consumer demand for its product. Vertical integration has facilitated this growth. By coordinating all phases of the industry, it has been able to produce a large volume and high quality food admirably suited to consumer acceptance. Following in the tradition of most agricultural commodities, production and prices became notoriously unstable. The vertically integrated organizations coupled with many independent producers could not solve the instability problem. Hence producer marketing boards were established to abolish overproduction. The Alberta Broiler Board has been successful in fulfilling this objective--perhaps too successful--at the cost of a higher price level for the product. While the cost of stability is invariably a higher price level, the trade-off between stability and price level should not entirely favor the former option.

To gain stability in production, control of marketing was necessary. Control was essential to the viability of the small producer and counter to the plans of the integrator. Planned expansion of production facilities necessary to fulfill the requirements of high capacity processing plants was effectively forestalled. The most aggressive firm in the industry chose its best alternative and acted. Firm A acquired three broiler farms, a hatchery, and a 50 percent share of Firm B which is integrated vertically into hatchery facilities, growing and processing

facilities as well as feed manufacturing (through Firm D). As a result, Firm A now has a virtual monopoly on the Alberta broiler industry, directly and indirectly through its associations.

The one stage in the broiler industry not completely dominated by the Firm A-B complex is production of the raw material. If majority control of growing facilities by Firm A can be prevented, monopolistic tendencies of this firm can be tempered. As long as Firm A requires independent product, it should be willing to negotiate and cooperate to a reasonable degree. If the Firm A organization attempts to use or does use its market power to coerce, intimidate, or exterminate rivals in the industry, decisive action must be taken with a view to dissolving the Firm A-B merger.

The activities of Firm A in other provinces requires careful surveillance. Competition from other provinces is necessary to keep broiler prices in Alberta realistic. If Firm A should obtain a prominent position in any of the other Western provinces, this competition may not be forthcoming. Firm A presently owns a hatchery and processing plant in British Columbia. A logical province for further activities would be Manitoba. If prices can be raised in that province, prices in Alberta would naturally follow, primarily benefiting Firm A.

The Marketing Board must be expansion minded. The decrease in exports and increase in imports experienced since the Board began operations indicates a marketing policy that is too restrictive for the long term growth of the industry. Planning production to meet optimistic demand projection, even if demand is slightly overestimated, will prove to be superior to underproduction. Producer returns have been more than

adequate for their investment, and an increased volume of sales should partially compensate for lower, more realistic prices.

The future of the broiler industry in Alberta will be determined by the policies of the Alberta Broiler Growers' Marketing Board and the practices of Firm A. The following recommendations are made with the objectives of maintaining the long-term growth of the industry for the benefit of all segments of the industry and the welfare of consumers.

Policy Recommendations

(1) Quota control by Firm A-B must be frozen at present levels, with the possible exception of normal quota increases as granted by the Marketing Board. Acquisition of additional production facilities or control over additional growing space by the A-B group must be prevented. It should be the responsibility of the Marketing Council and the Industry Advisory Committee to determine the transferability or non-transferability of quota on an individual case basis, and to render judgement on appropriate levels of quota control. This recommendation will have the effect of reducing the percentage control over production presently enjoyed by Firm A-B, thereby increasing the competitiveness for independent production and services to independent growers. Regressive effects to the firms involved can be minimized by Board pursuit of production expansion.

(2) Firm A should be prevented from acquiring additional hatchery and processing facilities in the province or any measure of control over additional hatchery and processing facilities. At present levels of concentration, little improvement in operational efficiency can be expected from higher concentration. Additional control over

the local industry by Firm A would invite deterioration of exchange efficiency. A comprehensive review of the structure and conduct prevailing in the industry, at intervals of four or five years, will be necessary to assess the implications of this recommendation. Over time other firms will expand their operations and be in a position to compete on more equal terms with the A-B complex. At such time, any restraints imposed upon Firm A should be rescinded.

(3) The Director of Investigation and Research for the Combines Investigation Act should be informed of any acquisition, pending acquisitions, or purchases of shares in any company involved in the broiler industry in any province outside of Alberta if the purchasing firm be Firm A or Firm D, with the major objective of assessing the competitive implications of such acquisition.

(4) Firm A has attained such stature in the Alberta broiler industry that its business dealings demand surveillance. Upon clear evidence of any tying arrangement, predatory pricing, exclusive agreements, refusals to deal, or any discriminatory practices, or any evidence of excessive profits in hatchery sales or processing margins, proceedings should be initiated to dissolve the merger of Firm A and Firm B and to provide for the divestiture of Hatchery S and broiler farms A3, A4, and A5.

(5) The Marketing Council, in its supervisory role to the Marketing Board, should periodically scrutinize the import-export situation existing in the industry. There is little justification for Alberta's transition from a net exporter to a net importer. Alberta must remain competitive with other provinces and maintain

a close import-export balance to ensure local industry growth and reasonable consumer prices.

(6) Available evidence clearly indicates that grower returns on investment were more than adequate over the study period. There is a danger that excessive net returns realized through the quota system will eventually be capitalized into the value of the fixed assets, raising production costs. Capitalization of quota can occur regardless of the Board's policy of issuing free quota, because this quota is controlled by the Board's estimation of industry growth. The Marketing Board and Marketing Council must realize that contrived scarcity will benefit a few at present only to jeopardize the future for all.

(7) The degree of concentration existing in the broiler industry enhances the opportunity for realizing much of the operational efficiency available to the industry. This concentration can be conducive to long-term industry growth provided artificial barriers to free interprovincial trade are not erected. Division of markets, either through some form of National Marketing Board or by provincial Board cooperation, must be resisted. Free flow of the product into the local market will prevent monopoly pricing by Firm A or the Marketing Board, and free flow of the product to other markets allows expansion of the local industry.

(8) The dynamics of the industry justify an annual review of the situation by an independent body. This review should disclose the competitive atmosphere of the industry, the levels of profits at each stage of the industry, the level of imports and exports, and other economic considerations that influence the growth and viability

of all segments of the industry. Implicit in the review is the necessity of analyzing the changing conditions prevailing in the industry, with the purpose of controlling or directing this change to a structure and performance duality that will be beneficial to industry and society alike.

Recommendations for Additional Research

This study concerning the structural and organizational characteristics of the Alberta broiler industry could have been enriched through prior knowledge of certain economic variables. Determination of these factors were unfortunately beyond the time dimension and resource capabilities of this thesis. Specification of these economic variables is necessary considering the degree of control already existing in the industry. This control is exercised through marketing quotas administered by the Broiler Board and through the market power exhibited by Firm A. Under these circumstances the normal exchange mechanism featuring competitive pricing cannot be expected to function properly. Given that a high degree of control can be expected to continue in the industry, it is imperative that this control be channeled towards the long-term growth and progressiveness of the industry while eliminating regressive effects on income distribution and resource allocation. To accomplish this objective, specific knowledge of several economic forces must be ascertained and utilized. There are three related areas where research is required to establish a framework from which decisions relating to adequate performance within the industry can be reliably reached.

(1) A comprehensive analysis of demand for the product at the retail level is required. This analysis should consider the demand for the varied forms of end product, such as whole frozen fryers, ice packed fresh, cut-up trays, and parts. The volume of trade through drive-in outlets and the seasonal variation in demand from this source must be considered. The effects on broiler demand of price changes in the major substitutes--beef, pork, and turkeys--needs to be examined for both magnitude and direction. Population and income effects are additional factors for consideration.

(2) The magnitude and nature of marketing margins throughout the system is necessary to ascertain the probable impact of changes in prices and costs at the various levels in the marketing channel. Because demand for the product at the farm level is derived demand from the retail level, knowledge of marketing margins is imperative in order to ascertain how effectively price signals are transmitted through the system. Cost and price information at all stages of the production process, including the final mix of end products will be required for meaningful analysis.

(3) Examination of price movements as they occur in the marketing system follows from the above research. Knowledge of the origin of price pressure and the resultant scope of price adjustments would be very informative. In an industry that is controlled by opposing forces at various levels, what factors contribute to substantial price adjustments? How are price adjustments at the grower level reflected throughout the system, and does the amount of change at the

various levels differ with the direction of the original price change? Conversely, what price changes occur at the growing level from adjustments to the retail mix of prices?

Knowledge of the above factors will facilitate understanding of the relevant issues occurring in a dynamic industry. The common objectives of industry growth and profitability of all segments of the industry can be pursued with objectivity. Knowledge of the influences of various factors on demand for the products coupled with reliable market forecasting can alleviate severe miscalculation of supply. Given information concerning price and/or cost changes in the system, unreasonable fluctuations in these variables can be identified as to source and cause. Through common information and cooperation among the components of the system, the broiler industry can remain a viable and prosperous entity that is a tribute to the Alberta economy.

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APPENDIX

BROILER GROWER QUESTIONNAIRE

NAME: _____

ADDRESS: _____

AUTHORIZED SPACE: _____ Square Feet.

1. Number of chicks placed in 1968 _____.

1967 _____.

Name of hatchery supplying chicks:*

1968 _____ Location _____

1967 _____

2. Number of broilers marketed in 1968 _____ Weight _____

1967 _____ Weight _____

Name of processor:*

1968 _____ Location _____

1967 _____

3. Amount of feed used in 1968: _____ tons.

1967: _____ tons.

Name of feed company:*

1968 _____ Location _____

1967 _____

* If more than one hatchery, feed company, or processor was patronized in either year, give approximate allocation of product to each firm.

4. Do you presently have any written contractual _____ and/or verbal _____ agreements to buy from or sell to any:

Hatchery _____ Feed company _____ Processor _____

If YES, what hatchery _____.

feed company _____.

processor _____.

Does your contract contain:

(a) a fee for growing _____

(b) a guaranteed price _____

(c) a profit-sharing arrangement _____

(d) other _____

5. Indicate with a check (✓) in the following table the source of financing for chicks, feed supplies, and buildings.

Source	Chicks	Feed	Buildings
Personal Savings			
Bank			
Other financial institution			
Feed company			
Processor			
Hatchery			

6. Does any poultry processor, hatchery, or feed manufacturing company in Alberta or elsewhere have any financial interest or equity in your broiler growing enterprise?

If yes, what company has the interest and what percentage of your enterprise is controlled?

Company _____ % control _____

MAJOR FIRMS IN THE ALBERTA BROILER INDUSTRY

Agnew-Fox Hatchery

Alberta Poultry Marketers Co-operative Ltd.

Canada Packers Ltd.

Chinookbelt Hatchery

Economy Feeds

Federated Co-operatives Ltd.

Maple Leaf Mills Ltd.

Ogilvie Flour Mills Co. Ltd.

Pinecrest Poultry Sales Ltd.

Pringle Hatcheries Ltd.

Stewarts Hatchery Ltd.

Swift Canadian Co. Ltd.

United Feeds Ltd.

Woodman Hatcheries Ltd.

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